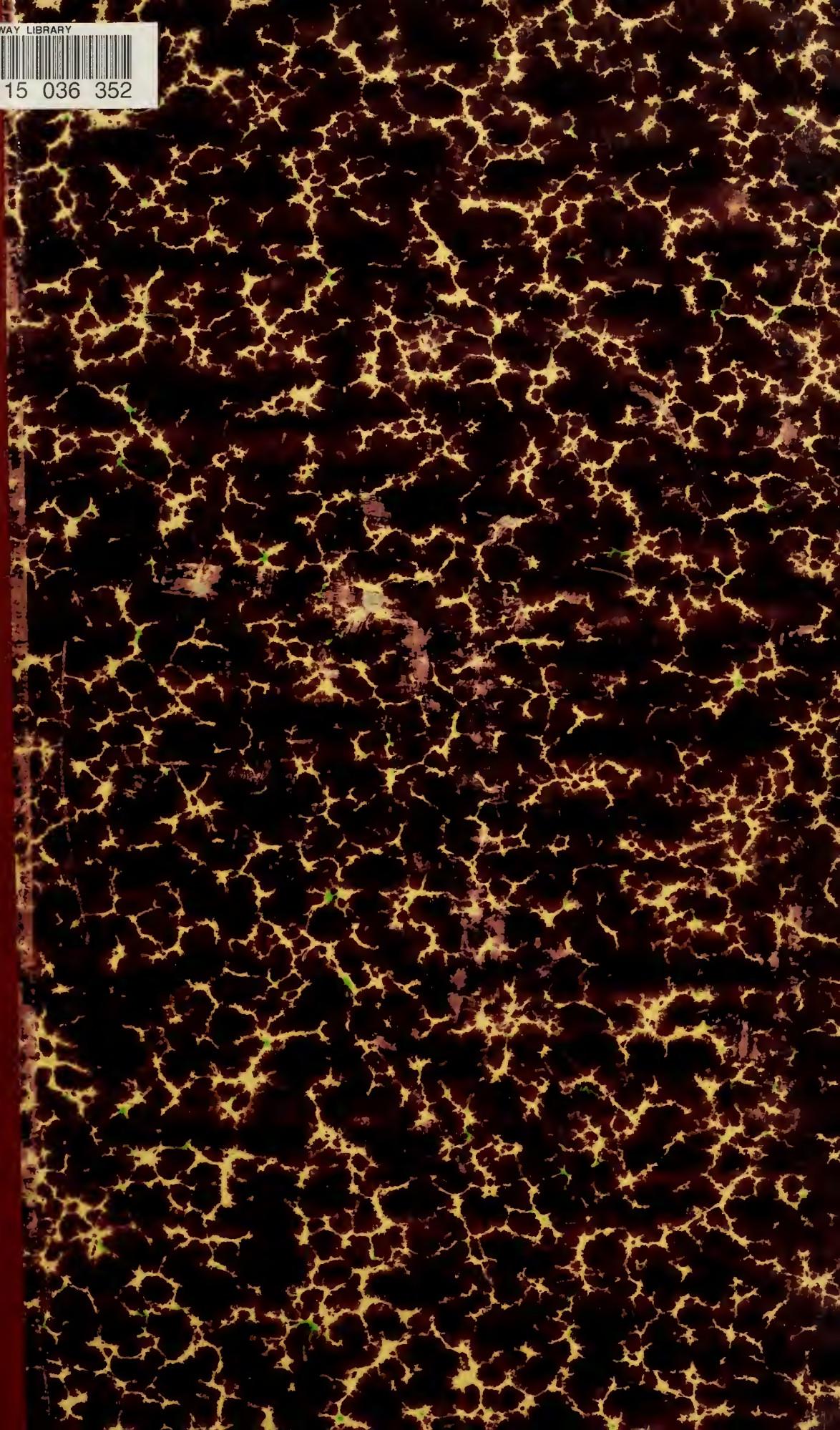


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MILITARY MEDICINE IN ITS GENERAL APPLICATION*

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Just exactly what is meant by military medicine and how does it differ from any other phase of medicine? Certainly it is not a question of diagnosis or particularly of treatment; it does not differ as does the artificial classification of tropical medicine, for instance. As customarily interpreted, it is a question of considering those conditions which are frequently encountered when large groups of individuals are brought into close association, so indicating a separate class or type of medicine. These diseases might be known as the "herd" diseases.

There enter into the picture, however, such items as special physical standards and the procedure of making physical examinations, the item of prophylaxis in its various phases as well as artificial immunization of the individuals to lessen the incidence of the various "herd" diseases.

As taught at the Army Medical School, military medicine embraces those variations in the character, epidemiology, prevention and treatment of diseases which are brought about by the special conditions incident to military life. These special variations are concerned with the environment and living conditions (communal as compared with individual or small groups) and include certain industrial hazards, such as exposure to extremes of climate of those unused to them, and, of a purely military nature, the various intentionally used traumatic agents employed in warfare, such as gas and gunshot wounds incident to the use of weapons and missiles not ordinarily encountered in civil practice.

To break the above down into further detail, we might consider first, the individual's physical and mental fitness for certain stress and exertion beyond that to which he is accustomed; second,

the terrain in its relation to vegetation, drainage, depth of water level and porosity; third, clothing suitable for the environment; fourth, nutrition (adequacy of diet as regards energy requirements, tissue building, fluid balance and general food factors); fifth, personal hygiene and its maintenance under communal conditions; sixth, sanitation; seventh, measures for the prevention and control of contagious diseases with special emphasis on those which tend to assume epidemic proportions under conditions of communal life (measles, mumps, pneumonia, scarlet fever) and those to which there is greater exposure under field conditions, such as malaria and gastro-intestinal conditions; eighth, transportation of the sick and injured with special emphasis on variations in the character of injuries which are not common to civil life (results of gas warfare, machine gun wounds, high explosives and shrapnel wounds, concussion shock and psychic trauma); and ninth, a consideration of evacuation, hospitalization and supplies under field conditions, subjects peculiar to the military and of little moment in civil life.

Let us say then that any of these subjects might be considered under the heading of military medicine, while many of them are not peculiar to the military service, but even so are seen more frequently and in much larger volume than in civil life. The manner of their occurrence and the necessary difference in their management for the protection of the individual and his associates, as well as the requirement of keeping the military personnel at its maximum strength, really constitute a specialty.

The question is sometimes asked as to whether it is entirely wise in mobilization camps to endeavor by every possible means to prevent certain infectious diseases against which passive immunization is not possible. For instance, during the World War, by segregation, working quarantine and other means, we prevented a certain considerable number of soldiers from acquiring, while in the home cantonments, such diseases as mumps, measles, chickenpox and scarlet fever, thus fulfill-

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ing the teachings and keeping down the sick rate and days lost in the hospital. Of course, measles and scarlet fever are not to be lightly considered, the former primarily because of its possible serious complication of bronchopneumonia, the latter both because of its initial severity and mortality rate and its possible sequelae of otitis media, nephritis and suppurative adenitis. Nevertheless it is logical to presume that the sick, generally speaking, can receive better care in home cantonments than if they should become ill with these same diseases under actual field conditions, when they are a burden as military non-effectives, add to the sick report, and occupy medical facilities needed for other purposes. While there is some basis for discussion for either viewpoint, it would seem that experience has justified a continuation of our present practice.

It may be worthwhile to consider rather briefly some of the more important phases previously mentioned as pertaining to military medicine and to indicate the procedures concerned in their management.

Physical examinations are made in civil life in a search for disease. As a preliminary to entrance into military life we must eliminate not only disease, but everything which does not conform to certain high mental and physical standards—too high many believe—including height, weight, bad postural defects, chronic skin diseases, unsightly malformations, certain visual and hearing defects, dental inadequacy even to malocclusion, heart lesions, many pulmonary conditions which require a roentgenogram for discovery, hernia, flat feet with qualifications, endocrine abnormalities, diseases of the nervous system and mental inadequacies. Many of these individuals can make their way in civil life, perhaps at the time have satisfactory and responsible positions, but long experience has shown that they are unable to function satisfactorily from a military viewpoint. As insurance companies from their long experience with hundreds of thousands of clients have learned to set their standards, so have the military surgeons from their experience of more than 100 years with hundreds of thousands of soldiers, learned to select the types best adapted to military duties.

These examinations must be done carefully and this is not incompatible with rapid work by the experienced examiner. The penalties of poor examinations are many and costly; duties poorly performed, a high venereal rate, many absentees, many company punishments and courts martial, a high sick rate, many days lost in the hospital and, in the face of the enemy, many ineffectives, with the hospital beds occupied when needed for those

incapacitated in combat. This is surely a high penalty to pay for carelessness in examination, yet, just now, we are having many soldiers coming into the hospitals with hernias and similar obvious conditions which were not found a few days previously. True, we all make mistakes but it is inexcusable to make the same mistake too often.

We have all undoubtedly criticized these high standards of physical requirements at times. It would agree better with our ideas of economy of the national resources if we might send the neurotics, the psychopaths, the mental defectives and other types of physical defects to the front and conserve the fitter part of young manhood to work in the mills and factories, to produce material wealth, increase national resources and propagate their kind. Unfortunately the former types make poor soldiers. Soldiers do not go to war to get killed, but to win battles. Intelligence and physical stamina are prerequisites. This fact is more and more important as new death-dealing inventions are perfected, to be superseded shortly by other and more complicated apparatus. Only the intelligent soldier can understand and manipulate such equipment to the best advantage, and only the best is good enough. Furthermore, in the American method of warfare, the initiative of the enlisted man is an important factor. He must be able to think for himself, act by himself, and perhaps lead others if his officers are killed, and keep on advancing. These factors necessarily eliminate any but the mentally and physically fit and entirely justify our present physical requirements for the military service.

The Surgeon General's Office sums it up in paragraph 8, circular letter No. 19 of his office, dated March 12, 1941, "The army is one of the elements of national defense and its present mission is one of preparation for an offensive-defensive type of warfare. It is in no sense a social service or curative agency. It is to be considered neither a haven of rest for the wanderer or shiftless nor a corrective school for the misfits, the ne'er-do-wells, the feeble-minded or the chronic offenders. Furthermore, it is neither a gymnasium for the training and development of the undernourished or underdeveloped, nor is it a psychiatric clinic for the proper adjustment to adulthood emotional development. Therefore, there is no place within the army for the physical or mental weakling, the potential or pre-psychotic, or the behavior problem. If an individual is a behavior problem in the civilian community, he will certainly become a more intensified problem in the service."

Suitable clothing for the soldier is another mat-

ter for the military medical practitioner. It is obvious that a soldier must be in uniform. We must know who are in the military service and who are not, and to what organization they belong. Again, there is the matter of pride and of esprit which any good soldier has in his uniform and his calling. The uniform and accoutrements must fit properly for appearance and comfort and to permit the physical exercise incident to training or combat demands. The clothing must also be warm or cool according to the climate or season and of such material and texture as will give serviceable wear. The color must be such as will not be too conspicuous under field conditions. All these and other factors are constantly under study by boards of experienced military men, and who should be better qualified to discuss and assist in deciding upon such matters than the practitioner of military medicine. This should be one of his specialties.

Prevention, not only of disease but of other factors, is also essential to the practice of military medicine. Prophylaxis includes considering the many little things that help morale as well as prevent actual disease. Included in prophylaxis is such a seemingly widely separated factor as the proper selection of a camp site. Such selection cannot always be left to the medical officer but, when the military situation permits, it is often largely his function to decide upon a proper site, and generally speaking the selection will be his when it concerns concentration areas, bivouacs, or other sites used for training or other non-combat situations.

Factors for consideration in the selection of a proper site deal with first, the ease of approach by proper road network in order that supplies, equipage, shelter, etc., may arrive without too much difficulty; second, proximity to food and other supplies, because even with a good road network, if there is too much distance to be covered, delays are a probability; third, the character of the soil; the military medical man must consider the slope of the terrain for drainage reasons; the nature of the top soil as to whether it will absorb moisture or easily become muddy, the nature of the subsoil, because we know that a clay top soil or subsoil drainage is bad and we prefer a sandy loam above and perhaps limestone subsoil. The soil should also be of such character as to permit necessary excavations for various purposes. As for topography, the slope should not be too steep since this leads to flooding during rain and leaves uneven surfaces for sleeping and various house-keeping purposes; fourth, shade which is grateful in warm weather, and trees which are a protection against wind; grass keeps down dust and

is more cleanly in many respects; fifth, we must consider the water supply, the quantity available, appearance of the water, ease of approach to the water supply, and whether it can be protected from pollution; and sixth, the practitioner of military medicine will note the presence of mosquitoes, flies and other insects, and the presence of mosquito and fly breeding places, and will not select a camp site in the immediate vicinity of such breeding places unless there is some possibility of their elimination. All of these should be familiar to the military doctor, for failure to evaluate them properly may mean cold, thirst, a muddy camp, insects, discontent, illness and ineffectiveness.

It was said by Napoleon that an army travels on its belly. May I add that it travels more rapidly and for further distances when its belly is comfortably full of palatable food in sufficient quantities and in such form as represents what we understand as a balanced diet. This means consideration of proper caloric requirements and these are obviously higher in men who are daily undergoing active physical exercise, than in the normal more or less sedentary individual, so that we figure about 3,600 to 4,000 calories a day as advisable. The diet should be balanced not only from the standpoint of proteins, carbohydrates and fats, but balanced from the standpoint of a suitable vitamin and essential organic salt content.

As Sebrell has pointed out, it has been only during recent years that we have realized the importance, from a dietary deficiency standpoint, of conditions other than rickets, pellagra and perhaps a little scurvy. We now appreciate that many nutritional diseases are present in the United States. He mentions anemia, due to iron or cobalt deficiency; nutritional edema, due to protein deficiency; hyperkeratosis and night blindness, due to Vitamin A deficiency; beriberi and peripheral neuritis, due to thiamin (Vitamin B₁) deficiency; seborrhea and keratitis, due to riboflavin deficiency; pellagra or encephalopathy, due to nicotinic acid deficiency; swollen, bleeding gums, skin and subperiosteal hemorrhages, due to ascorbic acid deficiency; rickets and osteomalacia, due to Vitamin D deficiency; and tetany, due to hypocalcemia. We must recognize disease in its incipiency and not wait for marked manifestations before taking proper steps to correct nutritional deficiencies.

It is the God-given prerogative of every soldier to growl about anything he chooses, and generally the food comes in for a reasonable amount of criticism. There is nothing that adds more to the content of the soldier and to his willingness to undertake any task assigned to him than proper food. No medical officer can escape a certain

amount of responsibility for the food that is served in the command with which he is functioning. Therefore it is incumbent upon him to be familiar with the details of what constitutes a proper diet. Many of these details have been worked out and are published for the information of those concerned, but no order is effective until it is carried out, and messing is too likely to be left to the mess sergeant to wrestle with. It is not at all a bad idea to have officers eating with the same mess that serves their men so that derrlications are rather definitely brought to their attention. The garrison ration, if properly utilized—that is, cooked and eaten in its full variety—is adequate as to calories, protein, phosphorus, iron and Vitamins A, B₁, and riboflavin, and is reasonably satisfactory as to calcium and Vitamin C. Note the qualification: if properly cooked and eaten in its full variety. The proper amount of fluid intake with added sodium chloride in hot climates or seasons will prevent many a soldier from falling out on the march or during combat, to say nothing of safeguarding his general physical welfare. The type of beverages permitted to be sold at post exchanges comes within this category.

The practitioner of military medicine is his brother's keeper and he must pay attention to many of the intimate details of that individual's life, matters with which he has concerned himself very little in civilian life. Still, each of these details may have to do to a considerable extent with the individual's health, resistance to disease, avoidance of minor defects which might interfere with the performance of his duties, and the preservation of his morale and self respect which is not a minor factor by any means, so that the supervision of the personal hygiene of troops is an important prophylactic measure. Seeing that the soldier washes his hands before eating, preventing the use of common towels, drinking cups or eating utensils, will prevent several of the common respiratory and gastro-intestinal diseases. Regular bathing is necessary and to insure that baths are taken it is sometimes necessary to run a bath roster. Hair cuts are necessary, not only for the general appearance of the troops, but as a matter of instilling pride in their personal appearance. The monthly physical examination detects not only skin lesions, venereal disease, soggy feet and symptoms of incipient disease of any nature, but the presence of body or hair lice. Facilities are available for the delousing of the soldiers and their clothing if these are found. The feet must be kept clean and dry so that the skin is healthy and the soldiers can march required distances without having to fall out; we look to the size and fit of socks and

shoes as a means to this end. We require that so far as possible extra dry clothing is available so that the men do not become chilled and perhaps ill later. Teeth need to be brushed daily in order that dental disabilities do not arise to remove the soldier from an active duty status or through the loss of too many teeth prevent the proper mastication of his food and lead to gastro-intestinal disorders. Here again is shown the importance of discipline. Personal hygiene is not difficult to enforce among well disciplined troops, but is difficult with newcomers. The assistance and cooperation of company officers and non-commisioned officers must be secured in all instances.

Under sanitation we may include a large group of factors which dovetail into other duties of the practitioner of military medicine, practically all of which are foreign to the experience of the civilian practitioner. Broadly speaking, a few of the matters included under this heading relate to the control of flies and mosquitoes and their breeding places, latrines, insurance of a good water supply, food inspection, sterilization of dishes at messes, sewage and garbage disposal, adequacy of ventilation, prevention of over-crowding, heating and lighting. There are numerous other factors which we do not have time to consider here.

During mobilization and preparatory to actual combat duties in the field, troops are provided with shelter in barracks. The military doctors are immediately concerned with the proper ventilation of these buildings, the prevention of crowding in the assignment of troops to the barracks, provision for proper heating, lighting and screening, and adequacy of plumbing facilities. In considering ventilation he must concern himself with the temperature in the building, the humidity of the air and the air movement. All these act to influence or interfere with the heat-regulating mechanism of the body. Ventilation is controlled by natural or artificial methods, and for the purpose of this paper we will consider only the former. The air passes through open windows, doors and roof ventilators, and inlets and outlets must be properly arranged for. The practical point to be borne in mind is that we must have ventilation and it is not uncommonly necessary to enforce proper ventilation by inspection of the barracks, even at night or especially at night, to be sure that orders are being carried out. The order does not procure ventilation; the carrying out of the order is the essential feature.

As for crowding, beds should be so spaced that there will be a minimum of 60 square feet of floor space per bed, or six feet center to center for the beds. Even here it is wise to have the bed so arranged as to permit of a head-to-foot relation-

ship to the neighboring bed. If tentage is used the tents may be floored and partially walled and this makes good shelter. With a Sibley stove in a tent and the roof ventilator properly arranged, good ventilation may be secured.

If there is a central heating plant, not a great deal of trouble is experienced in heating. Frequently stoves will have to be resorted to and this is the least desirable method of heating. It is always too hot near the stove and too cold in distant parts of the space to be heated. The occupants "crowd" around the stove and transmit respiratory infections.

Lighting, both natural and artificial, requires consideration. We know that sunlight has a considerable disinfectant action; we also know that dark, gloomy surroundings are bad for morale. Artificial illumination may require considerable ingenuity to prevent eye strain and again we have the problem of crowding around possibly too few sources of light.

Sanitation of messes may be subdivided into that of the mess building, storage and cooking of the food, care and cleansing of the cooking and eating utensils, and the control of food handlers. If possible, the mess building should be screened and ventilated with roof vents. It should be well lighted and comfortably heated. Sufficient accommodations should be available for the men to have a reasonable time in which to eat so that they do not bolt their food and may derive some enjoyment from their meals. The floor should be of some impervious material, and drainage should be provided. Constructions in the field in actively moving commands, of course, are extemporaneous and can only approach what is most desirable. All food should be carefully inspected, preferably by a veterinarian, if not, by a doctor or the company officer and the mess sergeant before being used. It should be properly stored so as to be protected from insects, rodents, dust and dirt. The temperature at the place of storage should be kept low. If refrigeration is available, this is a simple matter. If not, it is necessary to extemporize. Vegetables should be stored in open bins. Bread cabinets should be screened and aerated. Kitchen utensils and dishes should be kept in dust-proof and insect-proof cabinets or kept covered.

The proper method of dish washing is of the utmost importance to prevent dissemination of disease. Obviously the purpose of dish washing is to get dishes clean. This very elementary principle may be overlooked. The desiderata are *hot* water and soap in ample amounts; 160 degrees will destroy pathogenic organisms in one minute. We may add chlorine to the water in which the utensils are rinsed after washing in soapy water.

Fifty parts per million of chlorine, used for two minutes, is very efficacious. If it is necessary to wash dishes by hand we should be sure that the water is hot and is kept hot. This requires strict and continuous supervision. All utensils should be air dried; dish towels should not be permitted. Hand washed dishes should be rinsed in a chlorine solution. Mess tables should be made with removable tops so that they can be kept clean and prevent attracting flies and ants. Impervious tops are an improvement over wooden ones. Whatever the material, they should be thoroughly scrubbed after each meal and all cracks cleaned out.

Food contamination may occur from several sources, such as food handlers, poor storage and allowing to stand after cooking for too long a time before being served. Those individuals who are to handle food should be carefully examined in the beginning and at least at monthly intervals. They should be relieved from their duties whenever they have symptoms of disease, even respiratory, until the symptoms have disappeared. They should be required to wash their hands frequently, keep the nails short and clean, and wear clean garments, white if possible. White garments have a way of showing dirt and the clean white garment is a stimulus to the individual and his associates to keep a mess clean.

As for types of food which are susceptible of contamination, the military doctor who knows about these things can guard against an epidemic of food poisoning in his command. Boiled or roasted veal, fresh pork and chicken are good culture media. These articles of food may become contaminated subsequent to their cooking and if allowed to stand for sometime before serving, they become infected or toxic. Food of this nature should always be recooked before reserving and this means recooking and not warming up. Other foods likely to be contaminated are salads and hash. The average refrigerator temperature will not prevent the growth of infectious agents if the food is held too long. The answer is, do not allow preparation of excess quantities of food. Meats and vegetables should not be mixed in a salad and then allowed to stand. The mixture should be made just prior to serving and meat so used should be recooked. Leafy vegetables used raw may be contaminated by soil or by their handling. The infection from milk may be largely obviated by using only pasteurized or canned milk; the individual bottle is the safer container.

Field messes are generally company messes and utilize the field or garrison ration with additional minor purchases of vegetables and fruits. The principles of cooking, storing and serving are the same here as in any mess. The washing of the

kitchen utensils and the individual eating utensils is more elementary in principle, but the same results should be obtained. Storage even here may be satisfactory by using screened or air-cooled containers if ice is not available. Occasionally food may be put in water-tight containers and immersed under water in streams.

The doctor has not yet fulfilled his obligations to the mess until he sees that the waste is properly disposed of. This requires proper garbage containers with tight-fitting lids to prevent the access of flies, clean stands for the garbage cans, and prevention of soiling of the ground thereabouts; all this to keep down the fly menace. Some form of incinerator must be provided for the disposal of garbage and waste. This could be the subject for a paper and we do not have time to go into it now.

The military doctor is paid like the Chinese doctor, to prevent disease. He also has to treat it after it develops, but he can save himself and those whom he represents a great deal of inconvenience and discomfort by the prophylactic measures which are available to him. Thus another most important phase of military medicine will be disposed of by mentioning very briefly some of the factors concerned. Even in the United States there are various areas where malaria is present and mosquitoes are a problem. It is entirely possible that before the present emergency is terminated other areas where malaria is prevalent and mosquitoes are a problem may see soldiers of the United States Army. Our prophylaxis against malaria consists of preventing the soldier from being bitten by an infected mosquito, or, if he is so bitten, by preventing the development of actual malarial fever. For preventing the contact with a mosquito we have screened buildings and mosquito bars for protection during sleep. The proper care of mosquito bars and supervision to insure their proper use are most important. As further prophylactic measures in malarial areas we use atebrine, plasmochin or quinine. Many civilian doctors from non-malarial portions of the United States are not familiar with this very vital problem, but the proper methods of administering these drugs are set forth in special pamphlets.

We can, by immunization, largely prevent various diseases such as smallpox, typhus, diphtheria, and possibly influenza, tetanus, scarlet fever and measles. When some members of the command develop infectious diseases we seek to prevent the spread of the disease by early diagnosis and hospitalization of the individual, segregation of immediate contacts, and a working quarantine for certain others of the command. It is not probable that prophylactic vaccination will be of much value

in protection against respiratory infections during the present mobilization, but here the exposure of bedding to sun, keeping the members of the command out of doors, keeping tent flaps elevated and otherwise insuring ventilation, will be of great prophylactic value.

Another prophylactic factor of importance here is gradual military training. Some of the uninitiated exponents of physical training always come to the front with each period of mobilization and advocate exposing the recruit to a "toughening" process. Such a method may involve sending the recruit, without sufficiently warm clothing, out to drill in inclement weather; permitting him to lose sleep by unnecessarily early arising; and requiring of him physical exertion considerably beyond what he had been accustomed to or what he is physically suited at the time to undergo. Needless to say, such a method of recruit training is based on complete ignorance of the purpose or method of physical training. The results are unfortunate, being an increase in respiratory diseases and pneumonia and possibly the discharge on certificate of disability of men who have not been allowed to build up their physical stamina gradually enough, and the lowering of morale with a discontented and unwilling enlisted personnel group. I would warn all military doctors at this time of their responsibility in combating, so far as they may, this particular trend.

The prophylaxis of venereal disease is the prevention of prostitution. There have been prostitutes since the beginning of the world, there still are and there will always be, so we may be assured we will not be able to prevent venereal disease; we can, however, limit it in several ways. The intelligent soldier can have these matters explained to him, can be made to appreciate the seriousness of venereal disease and its effect upon his health and its possible effect upon his descendants. This is an important method of approach to the, as stated above, intelligent soldier. Many will not be influenced particularly by this approach and it becomes a question of using various methods with which you are familiar to prevent, so far as possible, disease after intercourse. The attempt at control by segregation of these practitioners of the oldest known profession is an impractical method of keeping down the percentage of venereal disease. It is also a most unpopular procedure and will have no place in our future plans. The control of prostitution is a matter for the local civilian law authorities to handle.

The transportation of the sick and wounded is too extensive a subject to be discussed here. Briefly, I feel that our methods are due for a change and that transportation will be rapid and far back. I

am quite sure this is possible and that by so doing we can avoid considerable of the physical handling of patients. This would be especially desirable in the seriously ill and in fractures. In the latter condition proper splinting is a matter of the utmost importance and still after all our experience we see occasionally in maneuvers patients with serious fractures of the femur being transported with inadequate splinting and with always, as a result, serious prejudice to their recovery. Airplane transportation and evacuation will undoubtedly be utilized more and more. I do not think that there will be much use for surgical hospitals at the front ordinarily. With automobile ambulances and even fair roads, it is perfectly feasible to carry a patient by one move from the front to a hospital where he can obtain definitive treatment instead of sending him through various intermediary stations.

The subject of evacuation, hospitalization and supplies under field conditions is again too extensive to be more than mentioned here and no attempt will be made to discuss it in any way.

All of the preceding details, heterogeneous as they may seem, have a certain logical connection as coming under the practice of military medicine. All serve the purposes of inducting mentally and physically qualified men into the military service and so supervising their training that they keep mentally and physically qualified, learn to care for themselves under concentration and combat conditions, and finally when and if they should become mentally or physically incapacitated, of so providing treatment for and disposing of them that each individual has had his best interests conserved, as has also the government.

Military medicine requires primarily for its practice good professional training. The better the doctor professionally, the better he will function in the performance of these special additional professional duties which constitute military medicine. Some have felt that the performance of many of the above-mentioned duties requires certain administrative ability, whatever that may be. Professional ability plus common sense furnish whatever may be necessary for success in the administration of military medicine, although a liberal dash of energy certainly activates the mixture. I have gone into many of these details in a seemingly elementary way because the average physician in civil life knows little of those factors that go to make up military medicine; he has never had to look after such matters. They are all taken care of for him by other agencies, public health officers or health department officials, so that he is able to concentrate on the purely individual features of his patient's illness.

The military physician attempts to fulfill the requirements in the way of professional ability and in addition attends to the above-mentioned details; any capable doctor can do both. A line officer can never take the place of the doctor. Do not be influenced by those who, having forgotten their profession through long abstinence from its study and practice, tell you that military medicine is concerned only in the carrying out of certain prophylactic, administrative and pseudo-military procedures and that we can always get doctors; the opposite is true. We can never get enough doctors, but there are always plenty of officers.

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THE TREATMENT OF TRAUMATIC INCIDENTS IN PSYCHIATRIC INDIVIDUALS*

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The era of specialization in medicine is beyond doubt a progressive step in the treatment to which a patient with a definite pathologic process is subjected. However, it is conducive to a tendency for the attending specialist to concern himself only with the pathology in his limited field, losing sight of the patient in general. This is reasonably true of patients with traumatic incidents who are receiving appropriate and efficient orthopedic care but are not progressing toward complete recovery; especially is this true of individuals who are mildly psychotic.

Often the patient loses initiative and feels discouraged at his lack of progress. Numerous factors contribute to this difficulty. Common etiologic factors are the sudden decrease in physical activity incidental to the bed rest and immobilization necessary for fracture treatment, dietary difficulties, and systemic conditions such as anemia. The patient's mental condition may assume minor or major importance, depending on the individual's reaction to the injury, his physical condition and previous personality assets. He may simply refuse to cooperate in diet and medication. Greater degree of psychotic tendency is illustrated by the older patient in whom bowel and bladder incontinence develop, and who becomes immediately a major nursing problem. Such frank psychoses may appear especially in sensitive, predisposed individuals.

With such manifestations in normal individuals following trauma, it is easy to consider the possi-

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bilities in all gradations of patients. The variation in treatment is one of degree: in the psychopathic patient the regime is merely more detailed. Medical care is doubly important and bears quick summary. Fluid intake must be kept at 2,500 cubic centimeters at least, regardless of the method of administration. Caloric intake, depending on the patient's physique, usually varies from 2,200 to 2,500 calories of a well-balanced diet. Failure to take these amounts calls for stimulation of some type. If the Vitamin B complex is insufficient, insulin in small doses before meals, although a disputed therapy, has definite beneficial effect in overcoming anorexia. Tube feeding is the final resort. Anemia calls for symptomatic treatment, preferably intramuscular liver therapy to facilitate absorption. Lastly, frequent consultation with both internist and neuropsychiatrist is a definite aid.

The immobilization of fractures in individuals with abnormal behavior must be radical. Absolute fixation of bone fragments by transfixing pins results in greater efficiency and comfort. Regional immobilization must be more extensive, as for example a long arm body spica cast for fractures about the wrist. This procedure is especially necessary for acutely disturbed patients, often uncooperative and overactive, who frequently remove the retentive apparatus with subsequent complete loss of position of bone fragments. For the patient with bowel and bladder incontinence, immobilization in a double long leg spica cast, resting on a Bradford frame, facilitates nursing care: a bed pan is kept constantly under the patient to prevent soiling of linen and an associated tendency to decubital ulcers. When it is difficult for the regular duty nursing staff to manage such patients, transfer to psychiatric wards managed by experienced personnel is imperative.

Physicians sometimes feel that a fracture in a psychopathic patient calls for as conservative or as little treatment as possible. This must apply to only a small group of patients who are hopelessly unable to care for themselves and whose outlook is definitely poor. From the standpoint of the mental patient, a poor outcome of treatment may retard full mental recovery. From the standpoint of the surgeon, the problem should not vary from that given any patient with a similar injury and in the same general condition. Good results are possible, but greater effort is necessary. The surgeon must realize these patients become attached to their appliances and capitalize on their illness: hence, at the earliest possible moment, appliances must be discarded.

Lastly, the treatment of psychopathic patients has medicolegal importance. Certain treatments

carried out by the attending neuropsychiatrist are hazardous and complications occur; this, however, is anticipated and he obtains a signed permission for the treatment from a responsible relative who understands these hazards. However, the surgeon who is called for a traumatic complication lacks the protection enjoyed by the neuropsychiatrist. In case of a poor result, relatives may assume that treatment was not on a par with that given other individuals. Therefore, the method of treating the traumatic incident should be fully understood by a responsible relative before treatment is instituted.

Shock therapy, originally described by Sake^{1 and 2} in 1933 for treatment of morphine addiction by using massive doses of insulin, was subsequently lauded by the same author for the treatment of schizophrenia. Convulsions occurred from the hypoglycemic shock. Meduna³ later developed the intravenous use of metrazol (pentamethylene tetrazol) to produce convulsions as a therapeutic measure. During the past few years, its use has been broadened to include numerous manic and depressive states. Without describing the action of metrazol in detail, it may be stated that a rapid loss of consciousness occurs, with first tonic and then clonic convulsions, flexion of hips, shoulders, feet and wrists and extension of knees and elbows. The abdominal and accessory respiratory muscles become board-like in rigidity and there is a gradual appearance of cyanosis caused by the apnea. The entire convulsion lasts about one minute and is probably the most severe recorded in man. The patient is subjected to a treatment every two to three days for an average of three weeks in depressive states and for two weeks in manic states. Under this regime, 90 per cent of the depressions and 66 per cent of the manic states were terminated in a large series.⁴

The serious drawback to this type of treatment has been the occurrence of traumatic complications which are similar but more severe than those caused by tetanus^{5 and 6} and epilepsy.⁷ Constitutional inferiority and osteoporosis have been suggested as predisposing factors; in none of the patients treated has evidence been found of disturbed calcium and phosphorus metabolism. A more plausible explanation is the production of a pathologic incoordination between antagonistic muscles⁸ or the extreme severity of the muscle contractions. That the degree or location of injury is not a result of severe extremity or back motion during the convulsion is shown by the persistence of these injuries despite numerous restraints and positions. Dislocations are the most common complication. Unless the jaw is properly restrained, dislocation

occurs in eight to twelve per cent. Dislocation of the shoulder occurs in fourteen per cent of all cases.

Extremity fractures localize chiefly in the hips and shoulders in one to two per cent. Impacted transcervical intracapsular fracture of the femur has been encountered in one instance following insulin shock in a healthy young male; treatment was conservative because the lateral views showed good position and one month had elapsed since the time of fracture. Bilateral intracapsular fractures of the femur have been reported. The most severe hip injury consisted of an intrapelvic protrusion of the head of the femur associated with a chip fracture of the superior aspect of the head in a young healthy adult female. The occurrence of the fracture was noted by the attending neuropsychiatrist as a severe audible and palpable crunching sensation. Because of the severe manic activity of the patient, she was treated by immediate reduction on the fracture table and fixation in a double long leg hip spica cast in wide abduction, incorporating steel pins through both tibial spines for six weeks to maintain traction.⁹ Shoulder injuries include all of the usual clinical pictures. A fracture of the lesser tuberosity was treated by a simple Velpeau dressing for two weeks, followed by physiotherapy. Fracture dislocation of the surgical neck in a forty-five-year old male, impossible to control by conservative means, was treated by pin traction through the olecranon, manipulation, insertion of a pin through the shaft into the head of the humerus, and immobilization in a shoulder spica cast; this patient is of interest since he also had compression of sixth and seventh thoracic vertebral bodies. A comminuted fracture dislocation in an obese fifty-seven-year old female was ultimately treated by open reduction; the encircling wire subsequently cut through the atrophic bone and considerable position was lost.

Spinal injury, found by neuropsychiatrists in 43 to 51 per cent of all cases treated,¹⁰ is suggested by the post-treatment complaint of pain between the shoulders and pain on deep inspiration. The localization is in the mid-thoracic region, and may involve as many as five segments, varying in degree from simple compression to comminution of the anterior portions of vertebral bodies. Nerve compression, as evidenced by chest pain radiation, is not as common as would be expected. Reduction of these compressions is practically impossible because of the splinting action of the thorax and the lack of extension in this section of the spine. Treatment consists of immobilization for six to eight weeks in a plaster body cast in slight extension without anesthesia. Unlike the fractures in tetanus complications, which cause few if any

symptoms and are seldom treated because they are healed before they are recognized, metrazol fractures are more serious because the patients are more active. Radical manipulation under anesthesia and immobilization in a hyperextension cast followed by a Taylor type back brace in one patient treated elsewhere showed persistence of the compression in the dorsal area and a rigid marked lumbar lordosis at the six months post-reduction period. This should indicate conservatism in treatment of these spinal injuries.

Neuropsychiatrists using convulsive shock therapy soon realized that these complications had to be prevented if the treatment were to survive. In an attempt to prevent the severe lower extremity and spinal injuries, preliminary spinal anesthesia was used.¹¹ This, however, did not prevent the upper extremity fractures.

Since the time of Claude Bernard, curare has been the ideal laboratory drug for blocking nerve impulses between nerve fiber and muscle. This motor paralysis in general affects nerve endings in all striated musculature. The use of the drug in spastic children by Burman¹² led Bennett¹³ to its application in convulsive shock therapy. An aqueous solution of curare containing ten milligrams per cubic centimeter is slowly injected intravenously. One cubic centimeter per twenty pounds of body weight usually produces sufficient paresis of muscles that the patient is barely able to lift his head or extremities. Curare action follows in this order: ptosis, strabismus, weakness of face and jaw muscles, paresis of neck, back and extremities. The facial expression resembles a myasthenic patient. This effect occurs within two minutes after injection. Thereupon, the estimated convulsant dose of metrazol is given. The usual convulsion follows with much less tonic and clonic contraction. Overdosage of curare is manifested by respiratory embarrassment and prostigmin should be available as an antidote. The combination of curarization and metrazol has not decreased the efficiency of the treatment but has prevented further traumatic complications.

The difficulties experienced in obtaining crude curare suggested the development of synthetic substitutes. Quinine methochloride has a curariform action on the neuromuscular junction. It can be administered not only intravenously but also orally, thus markedly increasing its possible use in medicine.

SUMMARY

Curare must now be considered an effective therapeutic agent; with its advent convulsive shock fractures and dislocations are no longer encountered. Its value and safety in the convulsive shock therapy field illustrate the possibilities in other

conditions benefited by muscle relaxation. Principles of treatment of traumatic incidents in psychopathic patients, namely efficient immobilization and comprehensive medical care, illustrate their application in individuals with similar injuries who are only temporarily difficult to control.

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THE CLINICAL PROBLEM OF INFECTIOUS MONONUCLEOSIS*

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This is an acute infectious disease which is so common as to be almost endemic in character, yet one which is seldom diagnosed by many physicians and so protean and bizarre in its manifestations that astonishing errors in diagnosis are frequently made. The disease was first described as glandular fever by Pfeiffer in 1889 and has received sporadic interest under different names since. None is strictly satisfactory; the two in most common use now are acute benign lymphadenosis and infectious mononucleosis.

The fact that this is the only benign infectious disease characterized by the appearance of large numbers of atypical leukocytes in the blood stream has made it of particular interest to hematologists. As a result many clinicians have come to think of it as a laboratory disease. We have seen between fifty and one hundred cases annually and feel that the condition is common, is important and should be recognized for several good rea-

sions; first, because an occasional case runs a malignant and even fatal course; second, it is worthwhile to be able to predict the prolonged convalescence, even in the mildest case; and third, differential errors are common and frequently important.

A very brief review of the clinical features in outline form will add to the clarity of the discussion.

Etiology: Unknown. The Listerella organisms are suspected.

Age Incidence: Our youngest case three months, oldest fifty-five years; commonly in children and young adults.

Incubation: Four to ten days.

Onset: Commonly with pharyngitis, fever and leukocytosis.

Symptoms: Sore throat may range from a mild granular pharyngitis to a severe form resembling that of blood dyscrasias. Aside from malaise the other symptoms are referable to the location of the involved nodes. May have pain in neck, mediastinum, abdomen or groin. Vomiting is common.

Findings: Fever, 101 to 103 degrees which becomes remittent after the first few days and may last for weeks. Pink and granular pharyngitis. Lymphadenopathy which is discrete and eventually generalized. Early one node or group of nodes usually predominates. Splenomegaly we have not seen as often as usually reported. Rash is common, appearing about the third day and simulating German measles.

Laboratory: May have leukopenia at onset, but the white cells increase rapidly, often to 30,000. At the end of one week the atypical lymphocytes appear and may be 40 per cent of the total. They differ from ordinary lymphocytes in being larger, more irregular in outline, having a pale and vacuolated cytoplasm. The nucleus is irregular and lobulated with blocky chromaffin and vacuolated. Heterophile agglutination is usually shown within two weeks and at this time the Wassermann reaction is frequently positive.

Course: Six weeks to three months is usually required for complete recovery.

As is the case with so many diseases, the first requirement for its diagnosis is to suspect it. If one examines the chief sites of lymph node accumulations the suspicion will be confirmed and only a blood smear will be needed to complete the diagnosis. Unfortunately the first two or three days of the disease may be without specific characteristics and the diagnosis cannot

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be made. Usually the patient is not too ill and one is justified in waiting for nodes to enlarge and the blood picture to become typical. A little later I shall present some of the situations in which this is difficult.

One of the most common presenting stories is that of having had the "flu" several weeks previously and failing to recover properly. In this stage the nodes are always enlarged and the blood typical. It is worthwhile to be able to make the diagnosis, eliminating more serious postinfluenza conditions and to give a prognosis, which, while not immediately consoling is ultimately good.

It is in the early diagnosis of the condition that bizarre differential diagnoses must be made. The diseases which at different times we have considered include: German measles, catarrhal jaundice, lymphatic leukemia, strangulated hernia and appendicitis. It is apparent that there are several other possibilities, including secondary syphilis.

The confusion with German measles is rather obvious and usually not too important. However, if one has pharyngitis, rash, enlarged nodes and a positive Wassermann reaction, it can be seen that some very expensive errors might be made. Lymphatic leukemia of the acute type seen in childhood should not be confusing to anyone familiar with the blood picture. A more interesting source of trouble occurs when the original node mass appears about the bile ducts, producing jaundice. Unless infectious mononucleosis is kept in mind a diagnosis of catarrhal jaundice is likely to be made and in older patients perhaps even cholecystitis.

We have twice seen this condition begin with vomiting, fever and swelling in the inguinal region of a degree that strangulated hernia was diagnosed and the egg-sized gland actually removed surgically. I recently heard of a block dissection of the neck being ordered for a supposed tuberculous condition. The pathologist is confused by the picture presented in such nodes because the cells are very undifferentiated and he may add to the general confusion by making a diagnosis of lymphosarcoma as has been done in one of our cases.

Our greatest interest in this problem and chief reasons for presenting it have to do with the onset with fever, vomiting, pain and tenderness in the right lower quadrant of the abdomen and leukocytosis. This is a fairly common syndrome in which everyone is interested and we have found ourselves completely unable to differentiate mononucleosis with this type of onset from appendicitis. Since becoming interested we have done

appendectomies on three children who proved to have enlarged mesenteric nodes and not appendicitis and who later developed the typical picture of mononucleosis. We have refrained from surgery in several others who I am sure would have been subjected to surgery were we not interested in this subject. More recently we have become a little cautious, however, since one of the patients we were watching had to have an appendiceal abscess drained.

The question is raised, then, as to whether or not the condition described by the surgical writers as mesenteric lymphadenitis is not frequently or always infectious mononucleosis. That this should have escaped attention is not too surprising. Surgeons are notably not interested in hematology and hematologists are equally uninterested in post-operative patients. All writers have noted the prolonged convalescence of mesenteric lymphadenitis and that their patients did not do well. The story fits very well with that of mononucleosis.

We are not in a position, obviously, on the basis of three cases to take a positive position on this question. Those three patients did proceed to develop infectious mononucleosis subsequent to their operations. Many children and young adults, however, harbor the abnormal lymphocytes for many months after an attack and the finding of a positive smear previous to surgery would not be conclusive. In fact, under such circumstances there should be a generalized lymphadenopathy and the time for abdominal pain on this basis would probably have passed. We have not been able to formulate any good criteria for a preoperative diagnosis, although there are several leads which point the way. The early blood smear is likely to show only polymorphonuclear leukocytosis. Fever may be higher than that usually seen in appendicitis. The pain may be out of proportion to the tenderness and rigidity and the vomiting out of proportion to all three. If one searches there are likely to be other enlarged nodes, and the granular pharyngitis will nearly always be present. An examination of the other members of the family may show later and more readily identified stages of the disease.

In spite of all this, we still feel that it is unsafe to postpone operation and we hope that with more surgeons on the lookout we shall be able to prove or disprove the identity of these diseases and be able to make a satisfactory preoperative decision.

Discussion

Dr. John R. Parrish, Grinnell: Dr. McFarland's informative paper clearly brings out that infectious

mononucleosis must be considered in the differential diagnosis of an acute abdominal condition, especially in a child, and particularly when the great amount of pain does not conform to the small amount of spasm and tenderness which are present. It is unfortunate that the blood smear becomes typical too late to be of any use in the differential diagnosis. Each of us has removed an appendix in a supposedly acute condition, only to discover it to be normal, but upon investigating the abdomen found the mesenteric nodes to be greatly enlarged. I confess to having called the case mesenteric adenitis without much idea as to etiology until I heard Dr. McFarland's paper. The blood smear from a case of mononucleosis must be differentiated from that of leukemia, otherwise some serious prognostic errors will certainly be made. The lymphoid cells in leukemia are very likely to exhibit a monotony of form which is characteristic, while in infectious mononucleosis a more varied structure is seen with deeper staining lobulated nuclei as contrasted with the paler, more circular nuclei of the cells seen in leukemia. The more adult cells seen in mononucleosis are undoubtedly active and useful cells put out by the body to overcome the infection. After hearing of the frequency with which he has discovered the disease in his practice, Dr. McFarland has stimulated me to take more blood smears in suspicious cases.

Dr. Eugene Van Epps, Clinton: Dr. McFarland has just given a complete description of the clinical manifestations of infectious mononucleosis. He has brought to our attention a disease process that many of us have forgotten. I have been interested in the past two years in the differential diagnosis between mesenteric adenitis, infectious mononucleosis and appendicitis in children. The first two conditions can simulate appendicitis so closely that one is not justified in denying the patient surgery. In two years of practice I have seen no cases of mononucleosis, no matter how hard I have tried to substantiate such a diagnosis. Dr. McFarland may argue that I have no patients or that I am not as conscientious as I might be about searching. Be that as it may, no cases have come to light in my own practice. However, I have seen many cases of mesenteric adenitis for which it was felt that surgery had to be done in order to rule out appendicitis. These individuals had admittedly higher white counts and fever than the usual run of appendicitis, but because of rigidity and vomiting, appendicitis was considered. These individuals as a group did not have a stormy post-operative course but several ran high fever for thirty-six hours. Following this the patient had an uneventful recovery. These patients did not have infectious mononucleosis; blood counts were done as late as ten days postoperatively. It is doubtful that the two conditions, infectious mononucleosis and mesenteric adenitis are the same disease process. However, we must be on the lookout for each. If the patient does not recover completely in the usual time, a blood count should be done after ten days.

NON-MALIGNANT LESIONS OF THE LARGE BOWEL*

CLYDE B. MEFFERT, M.D., Cedar Rapids

It is obviously impossible in a short space of time to deal with many of the lesions of the large bowel. However, out of a large group of lesions which might include various infections, tumors, etc., it seemed best to select two which might be of interest to a group of surgeons. The two lesions which were chosen for discussion were diverticuli and polyps. Diverticuli are said to develop because of increased intraluminal pressure in the colon. It occurs in about five per cent of colons in people past forty years of age whose colons are examined by the roentgen ray. About ten to fifteen per cent of these people will at some time develop diverticulitis or an inflammatory process in one or more of the diverticuli.

Nevertheless, diverticulitis is primarily a medical disease except for the complications. Since diverticuli of the colon usually occur in the sigmoid, the symptoms of inflammation are usually manifested by pain in the left lower quadrant of the abdomen; the physical findings are usually moderate tenderness, moderate rigidity and some leukocytosis. In other words, the symptoms and findings are very much like those of appendicitis except that they are on the left side. Usually the symptoms are not relieved by an enema and usually are made worse.

If a patient gives a history of preceding trouble and is in the right age group, and not too ill, the diagnosis is not too difficult and the treatment is definitely medical at this stage. However, there are times when one cannot be certain that he is not dealing with a pelvic appendix. If the patient is quite ill and a definite diagnosis cannot be made, I believe it is better to resort to surgery because certainly the incidence of pelvic appendicitis is much greater than the incidence of diverticulitis. The inflammation in a diverticulum often spreads to the wall of the sigmoid and gradually produces a partial obstruction because of edema and chronic inflammation.

Some progress has been made in the diagnosis of the condition in recent years. In June, 1940, Shatzki reported from the Massachusetts General Hospital that the x-ray appearance with a barium enema was quite typical in that the mucosal folds are visible through the area of constriction, whereas in carcinoma these folds are not present. It is said by many authors that the indications for surgery in diverticulitis are:

1. Perforation with peritonitis or abscess formation.

*Presented before the Ninetieth Annual Session, Iowa State Medical Society, Davenport, May 14, 15 and 16, 1941.

2. Obstruction.
3. Fistulae formations.
 - (a) Bladder.
 - (b) External.

If we resorted to surgery in appendicitis only for these complications, we would be considered very poor surgeons. However, the two conditions are somewhat different. The wall of a diverticulum of the sigmoid is thin and usually the pain is not severe. Perforation may occur without much warning and the patient is not seen by a physician until one of these complications is present. We must also remember that in patients of this age group marked symptoms and findings are often not present until some such complication has taken place.

The decision as to whether or not to operate on a given patient is not always easy, nor is the correct treatment for the condition always easily determined. It is again the same old subject of so-called "surgical judgment" which Hugh Trout states is a "God-given gift."

However, when one has decided that surgery is essential, when the abdomen has been opened and a ruptured diverticulum has been found, there are many things to be decided. If the diverticulum can be removed and treated as an appendix, both the surgeon and the patient are fortunate. All too often this is impossible, in that the wall of the bowel is too much involved. The perforation is not as easily handled as a perforated peptic ulcer, and the bowel content is highly infected. The peritonitis is infectious and not chemical. We can all think of several things that might be done, but I can illustrate one method by reporting a recent case.

A man weighing about 240 pounds, and sixty years of age entered the hospital with the findings of a peritonitis in the lower half of the abdomen. At operation a perforated diverticulum was found which involved the wall of the sigmoid just above the pelvic floor. There was an area of gangrene in the wall of the sigmoid approximately one by two inches. It was impossible to exteriorize the area, and it seemed inadvisable to do a colostomy in the presence of a peritonitis. Therefore, the pus was thoroughly aspirated; sulfanilamide crystals were placed over and around the area of perforation, in the hope that they would be bacteriostatic; and a pack was placed to close the perforation, in the belief that it would hold until adhesions could wall off the area. Nasal suction was instituted and the rectal sphincters di-vulsed. He made an uneventful recovery.

Perforation of a diverticulum is only one phase of the problem and it is likely that more mistakes are made in cases which have gradually pro-

gressed to produce a partial or complete obstruction of the sigmoid. It is quite likely that all of you can remember at least one case in which this condition was confused with a carcinoma. I have already mentioned one of the x-ray findings in the condition. There are, nevertheless, cases in which the diagnosis cannot be made either by physical examination or x-ray findings; nor is the surgeon always able to determine the true condition when the lesion is found at operation. Many of these obstructive lesions due to diverticulitis have been resected in the belief that it was a carcinoma, and perhaps if this procedure is possible it is good surgery. One might theorize as to the best procedure in any given case, but again with your permission I would like to illustrate some of the difficulties with another case.

A woman, fifty-five years of age, had had abdominal pain and symptoms of a partial obstruction for a period of about five months. X-rays revealed an obstructive lesion in the sigmoid which had the appearance of a carcinoma. However, she had a fever of about one to one and one-half degrees, and her white blood count ranged around 13,000 to 14,000. The palpable mass was also moderately tender. An exploration seemed advisable and at operation a large orange-sized mass was found involving the sigmoid a short distance above the pelvic floor. It also involved the small bowel and the fundus of the bladder, and had the appearance of an inflammatory mass. It could not be exteriorized without resorting to a permanent colostomy. The mass was not in contact with the abdominal wall nor with the vagina. It was felt that the mass represented a chronic diverticulitis, and if so, could be treated without resection. The mass was aspirated and found to contain creamy pus. At this point, I suddenly remembered Dr. Hertzler's lecture to our group last year when he stated it was best to place a pack to an isolated abscess and the pus would drain along the pack after adhesions had formed. This was done but the abscess drained into the bowel. The patient continued to have a mass and her former symptoms. In spite of medical treatment the condition did not improve and three months later an aspiration biopsy through the cul-de-sac showed an adenocarcinoma. This was resected by Dr. Peterson at Iowa City, and found to be a solid tumor without an abscess.

With this experience in mind, it would seem that if a lesion of this type does not improve markedly on medical management in a relatively short time, surgery is advisable. If at operation it appears most likely to be a diverticulitis, a temporary colostomy should be done, but the local lesion must not be forgotten. If it does not con-

tinually improve a resection should be done. In the last mentioned type of complication, there seems to be rather general agreement that a temporary colostomy should be made, with the expectation that the fistula will close spontaneously if given enough time. The treatment, then, of diverticulitis depends entirely on the stage of inflammation, and the procedure to be followed in the complications not only depends upon the patient's general condition, but also upon the local findings.

Turning now to the subject of polyps of the colon, it is generally stated that they are of two types: first, the adult or acquired polyps; and second, the adolescent or congenital polyps. There is no proof as to the manner in which polyps form, except that we know they may follow an infection such as ulcerative colitis. They presumably develop here because of partial destruction of the mucosa by the infection which may leave a ridge, fold or tag which will gradually become a polyp. Others are supposed to develop over submucous lymph follicles.

There is more and more evidence that the adolescent or disseminated type of polyposis has a definite familial tendency. I believe it is also rather generally accepted that a polyp is a potentially malignant lesion. In the adult type there seems to be no predilection for any certain area of the colon. However, they are more common in the male than in the female, and are usually found in people past forty years of age.

Occasionally, a patient will present himself for examination because he has felt a mass protrude from the rectum. More often he comes because of bleeding or diarrhea. All too frequently these symptoms are ascribed to hemorrhoids, and no further examination is made. This may be adequate if the blood can be demonstrated to come from a hemorrhoid and no blood is present in the bowel above the hemorrhoidal area. However, even in these cases a digital and a proctoscopic examination should be made. If there is any question about the diagnosis, an examination with the sigmoidoscope and by barium enema should be carried out. The sigmoidoscopic examination is not difficult and is not used as frequently as it should be. It should always be done under direct vision and may be done either by the use of air pressure to distend the bowel, or by having the patient in the knee-chest position, or better yet by using a table on which the patient can be inverted. This type of table is not always available.

If a polyp is found in the lower rectum, it may be treated by clamp and cautery, or by excision and suture in the same manner that one might treat hemorrhoids. However, I do not believe

that it is good surgery to find such a polyp, take a biopsy of it, find it is not malignant and then leave it. These lesions must be removed if we are to do our part in preventing people from developing malignancy. If it is at a higher level in the rectum, cautery should be used. In cauterization one must be certain that the coagulation is not too deep and especially is this true if one is working above the peritoneal reflection.

Cauterization of polyps in the upper rectum or rectosigmoid junction is not easy. It requires a sigmoidoscope with a suction attachment to remove the smoke, and considerable experience. Polyps in other areas of the colon should be excised by transcolonic excisions. When polyps have been removed, the work is still not finished because these patients should be re-examined at intervals for a period of at least two years.

In the adolescent type of diffuse polyposis, the patient is indeed confronted with a rather formidable procedure. It has been shown by many authors that, if not corrected, this condition will almost invariably progress to carcinoma. Often the patient is first seen because of a severe infection which clinically resembles ulcerative colitis. It has been the practice until recently to treat these cases, first by the establishment of an ileostomy, and second, by a total colectomy of one, two or three stages, depending on the condition of the patient. In recent years this condition has been modified somewhat by first making an anastomosis between the terminal ileum and the lower sigmoid. The colon is then removed down to the area of anastomosis, and the polyps in the lower segment of the bowel are removed by fulguration. This latter procedure is more satisfactory from the patient's standpoint, but again it requires very careful and accurate cautery as well as frequent check-ups, and one might anticipate that some of these patients would eventually require a resection of the rectum because of malignant changes. This would seem to be true because in these people the wall of the bowel is literally studded with polyps of various sizes and it is expecting a great deal of a patient who has undergone several severe major operations to continue to believe that his trouble is not eradicated, especially since it is in an area that he cannot see. It becomes not only a load on his patience, but also on his finances.

It seems to me that if we are to consider a lesion of such serious character that the colon is to be sacrificed almost completely, it is more reasonable to complete the job and remove the rectum also, in spite of the fact that the patient might be more comfortable. It is true that an ileostomy is distressing when first established because of the

liquid character of the stools, but after the colon is completely removed, including the rectum, the majority of them will have a formed stool and the ileostomy will function in a manner similar to a colostomy.

In conclusion, then, I wish to repeat that the treatment of diverticulitis is primarily medical except for the complications, but the treatment of polyps is always surgical. Once the diagnosis of polyps of the colon is made, surgery must be advised and almost insisted upon if we are to do our part in protecting our patients from developing a malignancy of the colon.

Discussion

Dr. E. P. Russell, Burlington: Dr. Meffert has very ably covered the subjects of diverticulitis and multiple polyposis of the colon. Virchow first described diverticulitis as an entity in 1853, and the high incidence of diverticuli has been stressed repeatedly since. We are certainly in agreement that conservative management is the treatment of choice, with surgical intervention reserved for complications. At times the gross pathologic picture is almost impossible to differentiate from a malignancy with perforation and adjacent inflammation. I recently encountered a case of this sort.

There are many hypotheses regarding the etiology of polyposis. Bargen feels that the majority are on the basis of a chronic ulcerative colitis. Many others feel that the basis is inflammation. Lockhart Mummery has advanced the idea of an inherited tendency in the susceptibility of the epithelial cells to proliferate at puberty or in early adult life. There is a definite familial tendency toward this difficulty. David states that 95 per cent of the cases have an involvement of the sigmoid and rectum. The various estimations of malignant degeneration of the polypi average about 50 to 60 per cent. Fitzgibbons feels that all carcinomata of the colon develop from polypi. I would like to emphasize the value of the x-ray with the contrast enema for diagnosis of this condition. It is important, also, to overcome the dehydration, anemia and cachexia insofar as possible preoperatively. The operative treatment advocated by Rankin consists of one of two procedures: a three-stage graded removal of the colon and rectum, or an ileosigmoidostomy, followed by colectomy and fulguration of the rectal and sigmoid growths. The Mayo-Wakefield course of treatment is a five-stage procedure: the removal of the rectal and sigmoid tumors by diathermy, ileosigmoidostomy and hemicolectomy right, removal of the remaining transverse and descending colon, leaving a stoma, fulguration of the tumors through the stoma, and re-establishment of the bowel continuity.

Dr. L. C. Nelson, Jefferson: Dr. Meffert is to be highly commended upon the splendid paper which he has just presented. Our experience with diverticuli has been chiefly with the complications. The majority of the patients had ruptured diverticuli

and succumbed to a virulent peritonitis. One case developed multiple liver abscesses, and at autopsy, an unruptured diverticulum containing pus was proved to be the primary source of infection. This hard inflammatory mass could very easily have been mistaken for a malignancy. This patient had had the characteristic left-sided appendicitis for many weeks before he finally began developing chills and fever with slight jaundice. The high mortality rate in the other cases of ruptured diverticuli can be explained partly by the fact that these patients were somewhat older than the average case and did not tolerate a peritonitis at all well, and secondly by the fact that the sigmoid where this condition most frequently occurs is a very highly infected organ which produces a very virulent peritonitis.

In regard to polypi of the colon, I feel that Dr. Meffert has done very well to place special emphasis upon this condition, and that there is very little to add to his remarks. However, I have had some difficulty in impressing patients that they should have polypi taken care of even though they had had an alarming hemorrhage. They do not bleed constantly, and consequently unless the polyp is down in the rectum where the patient has a feeling of fullness, he may have small concern for his condition. Since polypi are generally recognized as potentially malignant lesions, I feel that we should impress the laity with this fact so that this condition will not be neglected.

THE SURGICAL TREATMENT OF CHRONIC DACRYOCYSTITIS*

JAMES E. REEDER, JR., M.D., Sioux City

Apparently chronic dacryocystitis is a condition which has been with us for many years, centuries in fact, since the first recorded treatment of the condition was by Celsus in the period of 25 to 50 A. D. The results then, as in later years, did not excite the physicians of that time with the idea that his was the only way in which to treat the disease. Celsus used cautery and made a passage into the nose. Archigenes in the year 200 used the same treatment. Paul of Aegina in the seventh century was of the opinion that a new passage into the nose was not the way in which to treat chronic dacryocystitis, but he did not advocate any other method. Anel in 1713 introduced the use of the probe, at least his is the first written record, and he reports good results. Woodhouse at the same time recommended either extirpation or a gold cannula to make a new passage. One can easily note that the treatment used now is not a new one. We have only added the refinements of aseptic technic and our modern advances in medicine.

The causes of dacryocystitis are stenosis (con-

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genital) of the nasal lacrimal duct, traumatic injuries to the duct, stenosis due to tumors of the nose and syphilis of the nose. If there is a free passage through the duct there will not be a stagnation of tears, and consequently infection of the sac. The infecting organism is usually of a mixed type and this may range from staphylococci and streptococci to pneumococci. Even actinomycosis and blastomycosis have been reported as being found in the sac.

The most common symptoms are lacrimation, redness of the eye and pus especially after a cold. The condition may become acute with a phlegmon over the sac that may involve both the upper and lower lids, and it may necessitate opening as one does a furuncle. It has been reported that a fistulous opening may persist, but the author has never seen that condition occur. The usual course is that of a chronic inflammatory process. Due to the repeated exacerbations of the infectious process of the sac, the wall undergoes a marked thickening, and one can see under the microscope a proliferation of the connective tissue elements. This extends down into the nasolacrimal duct wall, and the resultant contraction causes stenosis. The only escape for this accumulation of pus is by the way of the punctum lacrimalis and into the conjunctival sac. This means a conjunctiva and cornea that are continually bathed in pus. Thus if there is an abrasion of the cornea, or a penetrating injury to the globe the probability of infection is markedly increased. We may have as a result a corneal ulcer if the cornea is involved, or a panophthalmitis, either one of which may cause loss of vision, and in some cases even loss of the eye.

The most important thing in chronic dacryocystitis when it comes to treatment is to stop that discharge of pus from the puncta because as outlined above, there is too much danger to the integrity of the eye. Treatment by the use of sounds is usually very unsatisfactory especially if there is a stenosis of the duct, since either the duct will close again or there has been a formation of a false passage. To effect a cure by this method is not the usual rule. This leaves us but one of two methods to employ in this condition; namely, either extirpation, or the establishment of a new passage from the sac into the nose. Extirpation has been the method of choice by many and the author has removed a few sacs, but he feels that although the infection is being removed which is the reason for the operation, there is still going to be the question of epiphora with which to contend. The answer to that question is a physiologic re-establishment of the drainage of tears from the eye to the nose.

Before this is done, those cases which are suitable for such an operation must be selected. In the congenital type there is, as a rule, just a mucous or epithelial plug in the nasolacrimal duct, and an irrigation with normal salt solution will force out this plug and accomplish the purpose. A chronic inflammation of the sac is not common in the newborn infant. Cases which are most amenable to surgery are those patients who have had an infection for some time. It has also been pointed out by Corboy and others that the wall of the sac is much thickened and the opening made in the sac will stand a much better chance of staying open. Another point that must be determined is whether there is a stenosis of both the canaliculi somewhere along their course or at their entrance into the sac. If a number one sound is passed into the lower punctum and meets an obstruction there is a wrinkling of the skin over the sound, and gentle pressure will not allow the probe to go further. If there is a similar obstruction in the upper canaliculus, one can feel that an operative procedure other than extirpation is of no avail. Furthermore, pressure over the sac will not cause pus to be regurgitated into the conjunctival sac. However, if the canaliculi are patent, there is no trouble in getting into the sac, and pressure on the sac gives pus at the punctum. There are two ways of determining the stenosis of the nasolacrimal duct. One is by irrigation, and the other is by means of a radiopaque material injected into the sac and a picture taken. If the duct is patent, in the former, fluid immediately goes into the nose, and in the latter there will be opaque material in the nose. Neither finding will be present if the duct is not patent. Thus we can see that those cases in which there is a chronic infection of long standing and the duct is not patent are the ones which are the best for the operation we have in mind, namely a dacryocystorhinostomy. The reason for such an operation is that it disposes of the infection and at the same time, allows the resumption of the physiologic function of the system by eliminating the troublesome feature of epiphora through the short circuiting of the sac into the nose.

There are a number of types of operations which can be used. Of the intranasal type there is the West operation which has been modified by others, but one cannot be certain that the opening in the sac will stay open without the help of sutures. The most common of those are the external approach, and of these, the first one which comes to mind is that of Toti with Mosher's modifications, but again we have the same trouble of the sac opening not remaining patent. Another is the implantation operation of Stokes; it is a very

simple and easy procedure and is worthy of consideration. The two procedures (one is being used by the author) which use sutures are Arruga and Dupuy Detemps, and the only difference between the two is that the former uses a trephine and the latter uses a chisel to make the opening through the lacrimal bone. The author has been using the method of Dupuy Detemps.

After the usual preoperative preparation of medication and of skin, an incision is made from two millimeters above the internal ligament and medially three millimeters down to one centimeter below. Due to the nose there is a slight curve to the incision. If possible the incision is carried through the periosteum. The posterior flap is elevated and the retractor is placed, and this usually controls the bleeding. (Local anesthesia of two per cent procaine is used, and ten per cent cocaine is placed on cotton pledges in the middle meatus of the nose just under the anterior tip of the middle turbinate.) After sufficient exposure of the lacrimal fossa an opening in the bone is made. In the average case this bone is a millimeter or less in thickness, and very little trouble is encountered. However, if it is very thick, a burr may be used, and one can proceed in the usual manner with a small Carison biting forceps to enlarge the opening. One usually makes an opening at least one centimeter wide by one and one-half centimeters long, and this is very important because previous experience has shown

that if the opening is not large enough it will close. Furthermore, if one encounters any anterior ethmoid cells these should be exenterated. In the removal of bone a portion of the posterior ridge of the maxillary process is removed in order to assure enough room anteriorly. When enough has been removed the mucous membrane of the lateral wall of the nose is exposed. This is incised in the vertical plane and as near the mid-line as possible. The medial wall of the sac is also incised in the vertical plane. By means of very small ligature carriers the two posterior flaps are sutured together, and this is followed by the suturing of the two anterior flaps. Two sutures are placed in each pair of flaps, and triple O chromic 20 day sutures are used. In the suturing of the skin flaps fine black silk is used and two of the sutures are placed through the periosteum as well as the skin in order to promote healing; the rest of the necessary sutures are just through the skin. On the second or third day, depending on the patient, the sac is irrigated in order to remove any secretion and old blood that may have accumulated. This is done every day or every other day for at least ten days. The sutures are removed on the fourth day in order to leave as small a scar as possible. Usually no scar remains, or if one does, it is hardly discernible.

REPORT OF CASES

There will not be an individual report of every case, but one or two of the cases showed definite

REPORT OF CASES

	Duration	Previous Treatment	Surgery	Relief from Symptoms	Duration of Relief	Re-establishment
1. B. D. Left eye...	20 years....	No improvement..	Yes. Anastomosis.	Yes.....	3 years to date.....	Yes
2. A. D. Both eyes..	18 years....	No improvement..	Yes. Anastomosis Both sides.....	Yes.....	3 years to date.....	Yes
3. H. L. Right eye..	10 years....	No improvement..	Yes. Anastomosis.	Yes.....	2 years to date.....	Yes
4. L. P. Left eye...	7 years....	No improvement..	Yes. Anastomosis. Secondary wound infection.	Yes.....	2 years.....	Yes
5. H. J.....	12 years....	No improvement..	Yes. Anastomosis.	Yes.....	2 years.....	Yes
6. J. W*.....	5 years....	No improvement..	Yes. Anastomosis.	No. Opening not large enough.....		No
7. P. S.....	5 years....	No improvement (1 year).....	Yes. Anastomosis.	Yes. 80% at first	9 months...	Yes
8. J. G.....	9 years....	No improvement..	Yes. Anastomosis.	Yes.....	8 months...	Yes

*Referred from surgeon, treated by author.

changes from the normal, and thusly are interesting. Case No. 6 was the patient of another doctor, but was followed up by the author, and in spite of almost daily irrigations for four weeks the opening did not remain patent. It was subsequently learned that there was not a sufficient amount of bone removed at the point of the anastomosis, and as a result the opening into the nose was not large enough. This caused too much tension on the flaps and the sutures; they did not hold, and the area filled up with granulation tissue. This precluded any drainage through the artificial opening into the nose. In Case No. 7 there was some postoperative difficulty. This necessitated dilatation of the operated field, and the fracturing over of the middle turbinate to allow more room. To date there has been no recurrence of the tearing and regurgitation of the pus.

CONCLUSION

From two standpoints chronic dacryocystitis is a condition which should be corrected; first, from the patient's viewpoint of chronic tearing; and second, because of the constant threat of infection to the cornea. The latter is the most serious because eyes have been lost from an infection of a corneal ulcer in the presence of a chronically infected sac. In the case of the former the constant epiphora is a source of irritation to the patient. There are two ways in which this disease may be corrected. One is extirpation of the sac, but in this the patient may still have an epiphora that is irritating. The other is an anastomosis of the sac and the mucous membrane of the nose. The author feels that this is the most logical way of combating the condition because the normal physiology is being re-established through allowing the tears to drain into the nose, and eradicating an infectious process. There is a scar left in both cases, and if the sutures are removed by the third day it is hard even to see it after a few weeks. The one thing that is necessary is the irrigation of the sac at least by the second day. This removes any clot from the operated area if it is present. Usually, however, the tears start their course through the sac into the nose upon completion of the operation. If the sutures are placed properly in the sac and the mucous membrane, the opening is kept open a sufficient length of time for healing to take place. One is then sure that the opening will remain patent, while in the Toti operation, and others of a similar nature one has to depend on the scarring of the sac to keep the area open. The epiphora is relieved immediately or within twenty-four hours after the operation.

SUMMARY

This is a presentation of the surgical treatment of chronic dacryocystitis from very early history to the present time. At the present there are many ways in which the condition may be corrected, proving perhaps that no one way is the best. The author does not claim that the method Dupuy Detemps uses is the only one which should be used, but in his hands, he has secured the best results by this method. He does feel, however, that a physiologic re-establishment of function should be attempted wherever possible.

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Discussion

Dr. Benjamin F. Kilgore, Des Moines: The primary purpose in the treatment of any disease is the restoration, as nearly as possible, of the normal function of the organ or portion involved. In considering the treatment of chronic dacryocystitis, not only must the infection be removed, but if possible, drainage of the tears from the conjunctival sac must be provided. Physiologically, the tear sac is more than a reservoir to collect the tears. Numerous theories have been advanced, but probably the compression and dilatation of the sac are both essential. If the chronic inflammation of the sac has permanently destroyed its function, a dacryocystorhinostomy will not relieve the epiphora. The function of the sac should be tested before the surgeon decides upon any operative procedure. This can be accomplished by the instillation of four per cent fluorescein solution into the conjunctival sac after the lacrimal sac has been thoroughly drained of its contents by pressure. The fluorescein should be allowed to remain in the conjunctival sac for at least two minutes, after which the conjunctival sac should be washed thoroughly with a normal saline solution until no stain can be observed. Care must

be taken not to exert any pressure over the lacrimal sac. If a stained solution can be expressed from the lacrimal sac, we can be sure that normal drainage can be re-established by a successful dacryocystorhinostomy. If after several attempts, no function of the lacrimal sac can be demonstrated, a dacryocystorhinostomy will most likely be ineffective. If such a patient does not complain of epiphora, and many do not, extirpation will relieve the chronic infection.

A serious corneal ulcer, secondary to the chronic dacryocystitis, is an indication for removal of the sac, rather than an anastomosis with the nasal cavity. The choice of operation depends also on the nasal findings in the patient. Some nasal pathology precludes an anastomosis. Chronic atrophic rhinitis, chronic suppurative ethmoiditis, until after it has been corrected, malignancy of the nose, as well as tuberculous osteomyelitis and tuberculosis of the lacrimal sac are contraindications for this procedure. The dacryocystorhinostomy, as Dr. Reeder has pointed out, is the operation of choice in those selected patients where a comparatively normal physiologic function can be re-established.

Individual variations in technic are dictated by the experience of the operator. However, for a good lasting result, a large opening in the bone is essential, and the margins should be smooth before the flaps are sutured together. I have enjoyed the opportunity of reviewing this interesting and constructive paper, and wish to express my appreciation to Dr. Reeder for permitting me to discuss it at this meeting.

Dr. Sumner B. Chase, Fort Dodge: In the discussion of the surgical treatment of chronic suppurative dacryocystitis, I would like to say that Dr. Reeder has covered the subject thoroughly, especially as to the indications for and type of operation which he does for this type of pathology. My own experience has been limited to simple dacryocystectomy, because I have always felt that safety to the eye was the matter of primary importance and that secondary epiphora after the conjunctival sac had been freed from infection was not very troublesome to the patient. I feel that a properly performed dacryocystectomy, with obliteration of the lacrimal passageway and sealing of the canaliculi, makes the eye perfectly safe as far as infection from the lacrimal and conjunctival sacs are concerned, in case of abrasion of the cornea or penetrating injury to the eye. This factor of safety is perhaps exaggerated, because there are numerous reports in the literature by competent ophthalmic surgeons, of surgical procedures in the presence of a chronic suppurative dacryocystitis without resulting intra-ocular infection or infection of the wound. Various theories are promulgated by these men as to the reasons why there was not an infective complication, but nearly all of us, on the other hand, have seen disastrous complications in ocular injuries where the presence of a chronic suppurative dacryocystitis was not recognized or not adequately treated.

I think it is very difficult to visualize the actual

pathology in a chronically diseased tear sac and to be sure before operation that the sac will return to a normal healthy condition by simple drainage, which for all practical purposes a dacryocystorhinostomy amounts to, and I have been able to find very little in the literature as to the bacterial flora in the conjunctival sac following this procedure. There are numerous reports of intra-ocular major ophthalmic operations without complications following this procedure, but again, we have reports of several uncomplicated major surgical procedures of the eye by simple ligation of the canaliculi during operation and for a few days afterward, with the eye again bathed in pus shortly after an incision is closed and the anterior chamber has been reformed. If, upon opening the tear sac by the external route, the surgeon had enough experience in gross pathology to enable him to judge by inspection of the sac whether or not by simple drainage or fistulization through to the nose, it would become healthy, he could then proceed with a dacryocystorhinostomy, instead of removing the sac and obliterating the lacrimal drainage apparatus, and this might be the proper procedure.

From watching the operation, I should say that it is in some cases a very difficult technical procedure, especially in the presence of a badly diseased and friable tear sac, and also in one that has been incised or has ruptured two or three times, with a consequent large amount of scar tissue. I feel that in the presence of this chronic, dangerous and troublesome disease, the primary consideration is the safety of the ocular bulb and the elimination of the troublesome and annoying secondary conjunctival infection, because the secondary tearing in most cases is of very little consequence, being practically none indoors, and largely obviated by glasses out of doors on windy days. In certain types of highly nervous introspective individuals, probably a fistulizing operation should be considered in an effort to do away with the epiphora, with the understanding that any abrasive injury to the cornea or penetrating injury to the eye should have competent observation and treatment by a qualified ophthalmologist, because of the possible presence of pathogenic organisms in the conjunctival sac.

An operation was described by Dimitry in the latter part of 1939, of a new technic for dacryocystorhinostomy, which from his description is extremely simple. He asserts he has used this method in fifteen cases of chronic suppurative dacryocystitis, and that his operative results in all cases were excellent. His technic consists of pushing a four millimeter trephine through the skin and lower part of the lacrimal sac into the nose, and suturing the skin at the point of entrance. The after-treatment consists of a few irrigations through the punctum with an antiseptic solution. I have had no experience with it, but if it is as successful as he reports, it makes all other types of dacryocystorhinostomy seem very complicated and unnecessary. Theoretically, I can think of very many reasons why it should not work.

ACTINIC THERAPY IN MIDDLE EAR INFECTIONS*

FREDERICK J. CHAPMAN, M.D., Keokuk

From earliest history, man has realized and appreciated the value of light and heat in the treatment of disease. The ancient pagans worshipped the sun because of its power of dispelling disease and bestowing life to all growing things. Expansive solaria were built by the early Greeks and Egyptians for the purpose of public sun basking. It was man's foremost method of treating all diseases. It is no less useful today. It has been adequately proved that the rays of sunlight are absorbed into the body and that such absorption does result in changes which are helpful to the biochemical processes which we call life. An example of extreme penetration of light is afforded by the roentgen ray.

It was formerly believed these beneficial effects came, for the most part, from the so-called invisible rays of the solar spectrum, namely, the ultraviolet and the infra-red. Recent investigations however, show that many of the visible rays are also absorbed and produce effects which are quite as important. Time will not permit going into detail regarding the electrochemical changes which are brought about by the absorption of light but we do know that when absorbed, all of the emanations of electrical energy produce various phenomena resulting in increased metabolic and cellular activity which is due to the conversion of light into heat within the tissues.

Scharnkoff and Schededinck, Percy Hall, Russell, Eidenow and others maintain that ultraviolet increases the bactericidal properties of the blood. They have also shown conclusively that its application not only raises the blood calcium but stabilizes it as well and it is believed that phosphorous and other minerals are similarly affected.

How does all this apply to the purulent ear? Since this discussion has to do largely with children and young people who are the most common victims of suppurative ears, it is very obvious that any measure which will produce the body-toning, disease-resisting effect of properly applied sun light or one of its substitutes, will be as salutary in the suppurating ear as in similar conditions elsewhere in the body. Briefly, the subacute and chronic suppurative ear is often not entirely a local entity and its maintenance is largely dependent upon a lowered resistance to the various organisms which have brought it about.

Sunlight and its actinic rival, ultraviolet, defi-

nately raise this resistance. I recall the case of a man fifty-seven years of age who had had a suppurating ear since childhood. He thought he had done everything possible to remedy the trouble but to no avail. One summer he spent a month in the sun and hot sand at the sea shore hoping to get relief from rheumatism. After the sojourn he was pleasantly surprised to find that not only were his rheumatic pains gone but that his ear had also ceased discharging. For the most of us, living as we do, the opportunity of utilizing sunlight is practically nil. If we desire this sort of therapy we simply must make use of one or more of its substitutes which, quite happily, we may, and with the same or even better results.

It has been the experience of many otologists that the child suffering with subacute or chronic purulent otitis media is a below par individual. Many are anemic. Most of them are the victims of lymphatic dyscrasias such as enlarged tonsils, adenoids, pharyngeal nodules and the like. Even after the removal of such obstructions and foci, a certain number of these chronic ears still continue to discharge. Why? Because the chemistry of the body is still in such a state as to offer little resistance to microbic activity. In fact it often collaborates with it. It is for these cases that we should use every effort to build up the body defenses. Heliotherapy is one measure which we should not neglect. A case report will serve as an illustration.

J. S., a boy, nine years of age had suffered with bilateral ear discharges for nineteen months following an undiagnosed sick spell. Owing to the child's run-down condition, the tonsils and adenoids, which showed some enlargement, had not been removed. Strict cleanliness and various ear drops had been used with no success. In view of this, a high calcium diet was commenced with ultraviolet radiations over the entire body working up from a two-minute duration to fifteen minutes. As the general health began to improve, the ear discharges gradually lessened and ceased altogether in five weeks. No other treatment was instituted except the usual hygienic care of the ears. Here was an ordinary case in which ultraviolet radiations supplemented with attention to diet seemed sufficient to bring about the cure of a long-standing condition.

With another of the actinic modalities, infra-red, I have had only meagre experience. I should like though, to discuss luminous heat, a modality which I have been using for the past twelve years. Luminous heat or radiant heat light is composed of all the visible rays of the spectrum in contra-

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distinction to ultraviolet and infra-red which are emanations from each end of the spectral band only, and which rays are invisible. Some observers insist, however, that luminous heat contains a certain amount of the invisible rays also.

The therapeutic effect of the visible rays is somewhat different from that of the invisible. Here the effect is local rather than general. It follows, therefore, that the application of luminous heat to the ear is much more beneficial in the acute than in the chronic inflammations. The absorption of this energy has been shown to produce electrochemical effects which are pain-relieving, decongestive and phagocytic. Many observers hold the view that its principal benefit is due to the relief of stases. This engorgement, they claim, renders the tissue cells and phagocytes unable to cope properly with bacterial invasion.

Luminous heat is the most readily available and the least expensive of all the electric energies. This form of treatment is particularly effective in the pain of the acute otalgias of children. Usually they will tolerate it much better than they will any other form of heat because of its pain-relieving, soothing qualities. Often a threatened otitis media will be aborted if the light is applied early.

The generator of luminous heat is really nothing more than a clear incandescent light bulb. I prefer a tubular reflector to house the bulb, one which can be kept in contact with the head so that no light or heat is dissipated. One of these may be constructed at a cost of only a few dollars. Having nothing better at the time, however, an ordinary cylindrical oatmeal box or a large-sized ice cream container or even a card board funnel properly shaped will answer very well. If a cylindrical container is used, simply punch a hole in the bottom of it, insert the light socket, screw in the bulb and you are ready for the treatment. The conveyor which I have designed to supply to my patients for home use is constructed on the sliding sleeve principle which allows the light to be removed to and from the head without removing the reflector. With one of these simple reflectors it is possible to administer a treatment lasting as long as several hours if desired. Children with distressing earaches will often ask for the treatment once they find how palliative it is. This reflector is so adaptable that it may be used while the patient is lying down or sitting up for as long as is necessary.

To the ear which is already suppurating the effects are equally beneficial. There will usually be a temporary increase in the discharge but this

will be followed by a noticeable lessening as the treatments are continued. Two case records will illustrate the value of luminous therapy.

Miss E, nineteen years of age, presented herself, suffering with an earache of a week's duration. The right ear was discharging a watery pus which was very irritating. The mastoid process was slightly reddened and tender. The young woman was receptive to the suggestion of a possible operation because of the day and night pain. The leukocyte count was 21,000 with a normal ratio. Temperature was 101 degrees. In spite of this we decided to use the lamp for a day or two. The next day she felt better. There was much less pain and tenderness and the pus was pouring from the ear in increasing quantity. The patient rather slyly admitted that notwithstanding the recommendation to use the lamp for an hour each time she had used it for three hours at a stretch because of the relief it gave her. In two days the mastoid soreness and the earache had entirely subsided. The discharge had greatly thickened and was reduced to about one-fourth its former amount. In a week it had stopped altogether.

The second patient was G. B., a boy, seven years of age. This boy had been seized with a violent earache and the tympanic membrane had been incised by an otologist in a neighboring city. The earache stopped immediately with the release of pent-up pus. Everything was all right for a week when the earache returned. The boy was brought to me in acute pain. He was sent to the hospital and luminous heat was applied preparatory to doing a paracentesis if the discharge was not resumed. The ear began draining after the first treatment but stopped again after a few hours. The next morning, however, at the end of an hour's treatment, a thick greenish mass was expelled. Recovery was rapid from then on and he has remained free of trouble. The laboratory report on this case showed the *Proteus vulgaris* organism.

The types of infections which inhabit the middle ear bring us to a brief consideration of the use of chemotherapy. Beyond doubt it has proved to be the remedy par excellence in acute suppurations if used very early. Now and then, however, it seems of little value or cannot be used because of toxic manifestations. Then, too, while we are waiting for a laboratory report to decide whether we should use sulfanilamide or sulfathiazole we may resort to electrotherapy immediately, no matter what we may decide to do later.

Once again let me emphasize that ultraviolet

irradiation will prove helpful to those below par individuals who suffer with chronic suppurative otitis and that luminous heat is equally valuable in the acute types. It should be used early and it should be used persistently except, of course, in those cases which show that some dangerous complication has already become established. These types naturally demand surgical intervention. Even then, after the operation, an hour's raying with luminous heat or fifteen minutes of the infrared each day or two will certainly enhance recovery.

In conclusion let me say I would be the last to declare that actinic therapy should supersede other accepted measures for relief of purulent conditions in the ear, but I do claim that we have not used all of the means at our disposal until we have given it a reasonable trial.

Discussion

Dr. H. F. Hosford, Burlington: I have not used actinotherapy routinely in my practice because of a dislike for equipment, mechanical devices and danger of burns in applying radiant heat. The simple device of the light bulb in the box does away with some of these objections. The value of sunlight in tuberculous bone lesions has been demonstrated. Whether actinotherapy is effective in osteomyelitis due to the pyogenic organisms which we have in middle ear infections is under discussion. Dr. Chapman uses this method as an adjunct to adequate chemotherapy. He mentions only sulfanilamide. Since the offending organism is not always a streptococcus, sulfathiazole must be considered. When it can be demonstrated that the mastoid cells have broken down even with adequate chemotherapy I feel the mastoid should be opened and a complete operation should be performed. The value of actinotherapy has been shown by Dr. Chapman's case reports; so I believe with adequate chemotherapy, actinotherapy is of value in treating selected cases.

Dr. Carl E. Sampson, Creston: When I first read Dr. Chapman's paper about the use of the oatmeal box I was rather dubious, so I thought the best way to find out was to try it. I made my lamps out of two pound coffee cans and lined the lower third, inside and out with asbestos. The lamps were used on nine different cases of middle ear infection; seven of them were discharging ears. One patient was an adult and the others were children ranging in age from five to eleven years.

The most striking example of its usefulness was in a boy, eight years of age, the baby of the family, and very badly spoiled. He ate what and when he pleased and had pop, white soda, coca cola, or candy between meals. He was referred to me by the family physician for an earache following a cold. When I arrived at the home, I found a high tension

type of child with flushed face, lying on the davenport. He immediately proceeded to vomit on the living room rug. The father left the house and the mother, the technician and I took over. The right drum was bulging and yellow in color. The left ear was only slightly pink and had given no pain. The throat was red, showed no exudate, but showed some postnasal dropping. The nose had some mucopurulent discharge. The oral temperature was 102.6 degrees. After local anesthesia, a long paracentesis was made and thick pus escaped. Medication was left and instructions as to care of the ear were given. The blood count at this time showed the following: white blood count, 14,250; hemoglobin, 75 per cent; red blood count, 4,060,000; the differential count was lymphocytes, eight; leukocytes, four; stab cells, ten; segmented cells, 77; and eosinophiles, one. The urine showed a specific gravity of 1.030 but was otherwise negative.

The next day the family physician called on him and thought he seemed better, but the following day he had a temperature of 104 degrees, was delirious part of the time, and complained of the other ear. The left ear showed symptoms similar to those seen in the right ear. A long incision was made in the drum, and thick pus escaped. A smear was taken which, by stain and culture, showed pneumococcus. It was not typed. The child was hospitalized, started on sulfathiazole, and a special nurse was employed. The white blood count dropped 2,000. The rest of the count was essentially the same as it was two days previously and the urine was negative except for a specific gravity of 1.028. The x-ray of the mastoids showed slight clouding but no breaking down of the cells.

The temperature came down to normal within twenty-four hours. The right ear had very little discharge and by evening of the second day the left drum had closed in spite of dressing twice a day and inflation with the Politzer bag. A second paracentesis was done on the left ear and thick pus escaped. Then I thought about using the lamp. The lamp was used on each ear for an hour at a time three times a day. Both ears started to discharge freely and then gradually subsided over a period of days. He was given a regulated diet, and adequate vitamin and fluid intake. He was able to go home on the seventh day and made an uneventful recovery.

Here was a case of severe middle ear infection in which we had to fight the infection, and get the child and parents to understand the importance of a proper diet. In addition we were able to illustrate the use of the lamp as a valuable adjunct. I think we are prone to overlook some of the seemingly simple measures. Maybe we do not think of them, maybe they do not have a big name, perhaps they are not expensive enough, and maybe some of us are not mechanically inclined, but at any rate the lamp is worth trying.

DISLOCATION OF THE PELVIS WITHOUT FRACTURE

REPORT OF A CASE

DOUGLAS N. GIBSON, M.D., Des Moines

Complete dislocation of one side of the pelvis without associated fracture is an uncommon injury. This case is of interest because of the type of dislocation presented and the manner in which reduction was accomplished.

CASE REPORT

F. L., male, fifty-four years of age, a white coal miner was injured on January 23, 1939. While drilling into the face of a coal vein he assumed a position of sitting on his right heel with the left leg in front of him, flexed at the hip and knee. A fall of slate struck him over the right hip region, squeezing him between it and the wall to his left. He was extricated by fellow workers and immediately taken to the Iowa Methodist Hospital. There he was first seen by Dr. Lester D. Powell who called the author in consultation.

Shock was only minor. There was definite asymmetry of the pelvis. The right anterior superior spine was displaced superiorly and medially; a palpable, painful deformity of the pubis could be felt. He complained of slight pain in the right sacro-iliac region. He was able to void voluntarily and examination of the urine specimen showed nothing abnormal. The remainder of the physical examination was without bearing in the present complaint.



Fig. 1

Anteroposterior stereoscopic roentgenograms of the pelvis (Fig. 1) showed a dislocation of the right side of the pelvis without evidence of fracture. The right pubis was displaced upward,

backward and inward a distance of approximately one inch. There was a separation of the posterior border of the right sacro-iliac joint.

Manipulation for the reduction of the dislocation was performed on the day of the accident with the patient under spinal anesthesia. The mechanical principles of Gaenslen's sacro-iliac test were used as the basis for manipulation. The patient was placed in a supine position on a fracture table. The left side of the pelvis and lumbar spine were fixed by acutely flexing the left thigh and leg upon the abdomen where it was held by an assistant. Counter traction upward was obtained by a pull on a folded sheet placed across the left ischium. The right leg was then



Fig. 2

manually abducted and pulled into extreme hyperextension. Considerable force of a rocking nature was necessary to correct the rotary deformity and was accompanied by several audible snapping sounds. A roentgenogram taken with a portable x-ray machine after the manipulation showed the two sides of the pelvis to be in the same horizontal plane, but an inch separation of the symphysis remained. To correct this the patient was placed in bed and a pelvic hammock was applied to force the pubes together. Excellent replacement was obtained. This immobilization was continued for four weeks. He was then fitted with a pelvic and lumbar corset. Crutches and a cane were used for two months. Activity was gradually increased and he was discharged to return to work on June 12, 1939.

Figure 2 is the final roentgenogram in this case showing complete restoration of the contour of the pelvis.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

THROMBOSIS, EMBOLISM AND INFARCTION

INCIDENCE, PREVENTION AND TREATMENT

F. P. McNAMARA, M.D., Dubuque

Thrombosis, embolism and infarction are recognized as serious complications of many medical and surgical conditions. They definitely prolong convalescence, often are troublesome for years afterward and at times cause death in what otherwise would have been successful therapeutic measures. Because of their seriousness, many investigations have been made to determine means of prevention and better methods of treatment. There has been some progress in recent years, but that thrombosis and its sequelae still represent serious hazards, especially for patients beyond middle age, is indicated by the numerous articles concerning their treatment which appear in current literature.

The recent unexpected deaths of two patients due to massive pulmonary embolism stimulated us to analyze our series of 780 necropsies concerning the incidence of these intravascular lesions. The study not only re-emphasizes their importance, but also indicates the need for more intensive clinical efforts in their prophylaxis, diagnosis and treatment. Seven hundred and eighty necropsies were

INCIDENCE OF INTRAVASCULAR COMPLICATIONS IN 780 NECROPSIES

VENOUS	ARTERIAL
Left iliac or femoral*.....24	Left coronary .....54
Right iliac or femoral*....4	Right coronary .....2
Mesenteric .....4	Left iliac or femoral*....7
Portal .....5	Right iliac or femoral*....4
Sigmoidal .....2	Superior mesenteric .....8
Appendiceal .....1	Splenic .....3
Hemorrhoidal .....3	Ascending aorta .....2
Left jugular .....3	Abdominal aorta .....5
Vena cava .....2	Pulmonary .....2
Periprostatic .....2	Pancreaticoduodenal .....1
Ovarian .....2	Gastric .....1
Sagittal sinus .....2	Subclavian .....1
Basilic .....2	Innominate .....1
Splenic .....2	Left internal carotid .....1
Pulmonary (empyema) ....3	Right internal carotid .....1
	93
61	

*Includes the branches of the femoral veins or arteries.

CARDIAC

Right auricle	16
Left auricle	11
Left ventricle	16
	43

INFARCTION AND EMBOLISM

INFARCTION	EMBOLISM
Pulmonary .....53	Femoral artery .....2
Intestines .....8	Mesenteric artery .....2
Spleen .....14	Massive pulmonary .....11
Brain .....10	
Liver .....1	
Stomach .....1	
Right kidney .....11	
Left kidney .....8	
Both kidneys .....17	
Cardiac .....50	
Cardiac with perforation .....6	

Note: In five cases of pulmonary infarction, the sites of the thrombi were not determined.

studied and 180 (23 per cent) had thrombosis, embolism or infarction. Their distribution is shown in the accompanying table.

Among the 180 patients, there were only nine who were under thirty-five years of age. In the latter group, there were four with infections of the upper or lower extremities, three with post-abortive pelvic infections, one with peritonsillar abscess and one with puerperal thrombosis following a normal delivery. The great majority of patients with thrombosis were over thirty-five years of age, and this fact justifies the belief that aging is a causative factor in thrombosis. Aging, of course, indicates a decrease in circulatory efficiency, varying in different individuals at various ages and usually due to changes in the heart and blood vessels resulting from arteriosclerosis, syphilis or past infections. Pressure upon blood vessels by tumors, tight clothing or surgical dressings is also an occasional cause which must always be considered. In this series, the impression also has been obtained that obesity is a contributing factor, although some patients were underweight.

While many theories concerning the etiology of thrombosis have been advanced from time to time, Aschoff's theory¹ probably is most satisfactory. According to him, there is no single cause and in different patients, one or more of the following factors may play the predominating rôle; first, changes in the blood flow resulting in slowing or eddy formation; second, diminished or increased coagulability; third, increased or decreased power of agglutination of the blood elements; and fourth, changes in the blood vessel walls with endothelial damage. Unfortunately, there is no reliable method by which we can measure the above changes and predict in which patients thrombosis is likely to occur. Laboratory methods are not dependable and the method of measuring the circulatory time of the blood in the legs, devised by Weiss and Robb, has been unreliable according to Welch and Faxon.² To a large extent, whether thrombosis occurs or not, is a matter of probability. From past experience, we have come to recognize certain groups of patients as being more likely to have the complication of thrombosis. Thus, according to Crafoord and Jorpes,³ about twelve per cent of patients over thirty-five years of age, who submitted to operations on the gastro-intestinal tract, on the biliary system, on the urinary passages or to major operations for hernia or varices, developed thrombosis. In a previous paper,⁴ the high incidence of femoral thrombosis in fractures of the femur in elderly patients was pointed out, and that it occurs frequently after amputation of a lower extremity is well known. This is also true in severe infections of the extremities. To

the above should be added patients with any prolonged debilitating disease, and obstetric patients in whom there is a relatively high incidence of thrombosis. Furthermore, thrombi are not infrequent in patients with purulent infections of the nose, middle ear, mastoid or tonsils. Until some accurate laboratory method is found by which we can determine which patient will develop thrombosis, the internist, surgeon and otolaryngologist must recognize the above groups, as well as others, as likely to have intravascular complications. Every method possible should be made first, to prevent their formation; second, to make an early diagnosis when they form; and third, to treat them so as to forestall the sequelae that may result from their presence.

While undoubtedly many thrombi will form in spite of our best efforts, some can be prevented by adequate preoperative preparation of patients beyond middle age. The aims of such preparation are to overcome dehydration by giving abundant fluids, to build up the blood to essentially normal by treating anemia if present, and to strengthen the circulation by adequate stimulation. Varicose veins should be controlled by compression bandages or in some cases, by ligation. Too much intravenous medication is undesirable.

Postoperatively, the aim is to prevent stasis of the blood stream especially in the lower extremities. Indeed, the trend is more and more toward earlier rising and ambulatory activity after operation. Elevation of the foot of the bed, passive exercises, gentle massage of the lower extremities, breathing exercises and frequent turning of the patient in bed have long been utilized. To obtain more effective muscle contractions, de Takats and Jesser⁵ utilize bicycle pedals with controllable resistance mounted at the foot of the bed. Selected patients pedal on this apparatus for five minutes three times a day, starting on the third postoperative day. Leithauser and Bargo⁶ have gone even farther and advocate early rising and ambulatory treatment beginning on the first postoperative day. While obviously this procedure has its limitations and definite contraindications, it emphasizes how surgeons are attempting to prevent the ill effects of the prolonged recumbent position upon the circulation and upon pulmonary ventilation. In general, early rising means that the patient gets out of bed on the second or third postoperative day, although even on the first day the patient is helped to sit on the side of the bed and then stands beside the bed for deep breathing exercises.

A most important means of prevention and of treatment is that of postoperative heparinization which has been developed especially by groups in

Toronto, Canada^{7, 8 and 9} and in Stockholm, Sweden.¹⁰ Each of these groups has perfected purified heparin eliminating the toxic reactions which previously had limited its therapeutic use. Each group has shown the beneficial effects of judicious heparinization in the prevention of thrombosis and massive pulmonary embolism, and in the treatment of infarctions and thromboses which had formed before heparinization. While an occasional hemorrhage has resulted after the use of heparin, in an overwhelming majority of cases, the results have been most satisfactory. Since heparin is a normal constituent of the body, its use is entirely logical. When utilized in conjunction with other methods of prevention or treatment and when its dosage is adequately controlled, it represents a most valuable therapeutic agent in the control of intravascular complications.

Finally, the diagnosis of primary thrombosis is of the greatest importance regarding the welfare of the patient. Every one is familiar with accounts of patients who "were having a normal convalescence but who died suddenly of massive pulmonary embolism." This is always an admission that the primary thrombus had not been diagnosed. More frequently pulmonary infarction is the first recognized evidence of intravascular complication. Indeed, some clinicians believe there are forms of "silent thrombi" which usually means that they were not diagnosed. Possibly some thrombi in the pelvic veins or elsewhere in the body cannot be diagnosed, but this is not true of the great majority. However, clinicians must not expect the classical picture of phlegmasia alba dolens before a diagnosis of thrombosis is made. The signs and symptoms are rarely so evident and often demand a most painstaking examination before a diagnosis can be made. It is distinctly a clinical problem because with the exception of venography developed by Dos Santos,¹¹ there is no reliable laboratory aid. It is true that there is usually a moderate leukocytosis, but often this may be considered as due to the effects of operation. In general, there is a variable degree of pain or tenderness in the affected limb. The leg is enlarged due to edema, but often this can only be detected by exact measurements and not by casual observation. Culp¹² has advocated systematic measurements of each lower limb before and after operation in order to detect minor changes in size. Finally, the clinician should be "thrombosis minded" and must make intensive efforts to explain unexpected elevations of temperature or pulse. In our series the pulse rise preceded and was proportionately higher than the temperature in most cases. Indeed, a rising pulse and a falling temperature

were seen occasionally in proved cases of thrombosis.

To summarize, the high incidence of intravascular complications in certain groups of patients has been shown. The highlights of prevention and treatment have been outlined, but the necessary details can only be found in original articles listed in the references. The reports of Canadian and Swedish workers on the use of heparin in the prevention and treatment of thrombosis, embolism and infarction hold great promise for the better control of these important complications of many surgical and medical conditions.

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A CALL TO THE MEDICAL PROFESSION

The December 27 issue of the *Journal of the American Medical Association* carries the following editorial under the above caption, and the accompanying blank. It is highly desirable for this information and blank to come to the attention of as many physicians as possible and the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY is pleased to have this opportunity to cooperate in the effort at hand. By this means it is hoped to create a pool of names from which the Army and Navy may draw to provide physicians for the rapid expansion of the armed forces when that occurs.

The nation is at war. The Congress has passed an amendment to the Selective Service Act which will call for registration of every man up to the age of 65 and which will place all men under 45 years of age subject to service at the order of the Selective Service boards.

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established by order of the President on October 30. Thus the medical profession itself aids in determining proper distribution of the medical profession in sup-

plying the needs of the armed forces and maintaining medical service to civilian communities, public health agencies, industrial plants and other important needs.

At a meeting of the Procurement and Assignment Service held in Chicago at the headquarters of the American Medical Association on December 18, jointly with the Committees on Medical Preparedness of the American Medical Association, the American Dental Association and the American Veterinary Medical Association, plans were drawn for making immediately available to the United States Army and Navy Medical Corps the names of physicians who wish to be enrolled promptly in the service of the government in this emergency.

On the opposite page is published a blank by which every physician may at once place his name with the Procurement and Assignment Service as one who is ready to serve the nation as the need arises. If you wish to make yourself available for classification, fill out this blank and send it at once to Dr. Sam F. Seeley, Executive Director of the Procurement and Assignment Service. When these blanks are received, they will be classified and checked with the information available in the national roster of physicians at the headquarters of the American Medical Association.

In each of the corps areas covering the United States a committee is being established, including representatives of medical, hospital, educational, dental and veterinary activities. In the individual states, committees of medical, dental and veterinarian professions are being established through which the corps area committees will exercise their functions. In each county also local committees will provide accurate information regarding the status of each member of the profession concerned.

The raising of the Selective Service age from 28 to 45 will place a great number of additional physicians in the category of those on whom the nation may call as their services are needed. Estimates indicate that some sixty thousand physicians thus become available for service and that forty-two thousand dentists under the age of 45 also become subject to call. By enrolling with the Procurement and Assignment Service immediately, utilizing the blank on the opposite page, all physicians, but particularly those under 45 years of age, insure to every extent possible assignment to the type of service for which they are best fitted. They avoid thus also the possibility of unclassified service with the United States Army during the period that may be necessary following selection by the Selective Service before the commission can be secured. A physician called by the Selective Service who has not enrolled or who is not on a reserve list obviously serves without a commission during the time that necessarily elapses before a commission is secured. In future issues of the *Journal* announcements will be made regularly of the numbers of those who enroll and of the extent to which the immediate needs of the Army, Navy and other government agencies are being supplied.

**ENROLMENT FORM FOR PROCUREMENT AND ASSIGNMENT
SERVICE FOR PHYSICIANS**

Dr. Sam F. Seeley, Executive Officer
Procurement and Assignment Service
New Social Security Building
Fourth and C Streets S. W.
Washington, D. C.

Dear Doctor Seeley:

Please enroll my name as a physician ready to give service in the Army or Navy of the United States when needed in the current emergency. I will apply to the Corps Area commander in my area when notified by your office of the desirability of such application.

Signed.....

1. Give your name in full, including your full middle name:
.....
 2. The date of your birth:.....
 3. The place of your birth:.....
 4. Are you married or single?.....
 5. Have you any children? If so, how many?.....
 6. Do you believe yourself to be physically fit and able to meet the physical standards for the Army and Navy Medical Corps?.....
 7. Have you filled out previously the questionnaire sent to all physicians by the American Medical Association?.....
 8. When and where were you graduated in medicine?
 9. In what state are you licensed to practice?.....
 10. Do you now hold any position which might be considered essential to the maintenance of the civilian medical needs of your community? If so, state these appointments:
.....
.....
 11. Have you previously applied for entry into the Army or Navy Medical Service? If so, state when, where and with what result (if rejected, state why).
.....
.....
- Signature.....
- Address.....
- Date.....

STATE DEPARTMENT OF HEALTH

Walter Piering

Attendants at Recent Pneumococcus Study Course

Twenty-four persons, seventeen laboratory workers and seven physicians, took part in the seventh pneumococcus study course held at the

Department's State Hygiene Laboratory, November 18 to 20, 1941. Following is a list of those who attended:

LABORATORY WORKERS

Name	Address	Hospital or Laboratory	County	Sponsor
Bowyer, Annice.....	Sibley.....	Osceola Hospital.....	Osceola.....	F. P. Winkler, M.D.
DeJonge, Else.....	Mt. Pleasant.....	State Hospital.....	Henry.....	L. R. Ristine, M.D., Supt.
Freidel, Charlotte.....	Iowa City.....	Mercy Hospital.....	Johnson.....	Sister Mary Patricia
Giddings, Margaret.....	Mason City.....	Mercy Hospital.....	Cerro Gordo.....	H. W. Morgan, M.D.
Hamlin, W. D.....	Clarinda.....	State Hospital.....	Page.....	Norman D. Render, M.D., Supt.
Heles, James.....	Des Moines.....	Mercy Hospital.....	Polk.....	Franz Lengh, M.D.
Hughes, Margaret.....	Dubuque.....	Finley Hospital.....	Dubuque.....	F. P. McNamara, M.D.
MacLaughlin, Irene.....	Cedar Rapids.....	Security Laboratories.....	Linn.....	M. A. Chehak
Malone, Doris.....	Jefferson.....	Greene County Hospital.....	Greene.....	Evert E. Moody, Supt.
Millard, Wayne B.....	Cherokee.....	State Hospital.....	Cherokee.....	C. F. Obermann, M.D., Supt.
Nesby, G.....	Sioux City.....	Lutheran Hospital.....	Woodbury.....	A. C. Starry, M.D.
Nesby Elizabeth.....	Sioux City.....	Lutheran Hospital.....	Woodbury.....	A. C. Starry, M.D.
Peterson, Orville.....	Eldora.....	Eldora Memorial Hospital.....	Hardin.....	
Schwien, Augusta.....	Waverly.....	Mercy Hospital.....	Bremer.....	H. W. Rathe, M.D.
Sister Grace Marie.....	Le Mars.....	Sacred Heart Hospital.....	Plymouth.....	L. C. O'Toole, M.D.
Sister Marcellus.....	Le Mars.....	Sacred Heart Hospital.....	Plymouth.....	L. C. O'Toole, M.D.
Stookey, Dorothy Ann.....	Cedar Rapids.....	St. Luke's Hospital.....	Linn.....	F. W. Mulsow, M.D.

PHYSICIANS

Name	Address	Hospital or Laboratory	County	Sponsor
Bowie, L. L., M.D.....	Woodward.....	State Hospital.....	Dallas.....	E. M. Myers, M.D., Supt.
Chesnut, P. F., M.D.....	Winterset.....	Office.....	Madison.....	C. B. Hickenlooper, M.D.
Church, Ruth E., M.D.....	Washington.....	Washington County Health Unit and District Health Service No. 7.....	Washington.....	
Koeneman, E. O., M.D.....	Eldora.....	Office.....	Hardin.....	
Moen, H. P., M.D.....	West Union.....	West Union Community Hospital.....	Fayette.....	
Selo, Max, M.D.....	Independence.....	State Hospital.....	Buchanan.....	R. A. Stewart, M.D., Supt.
Throckmorton, Lazear, M.D.	Chariton.....	Office.....	Lucas.....	

WATER- AND FOOD-BORNE OUTBREAKS U. S. A., 1940

The Sanitation Section of the United States Public Health Service has released a preliminary report of water- and food-borne outbreaks of epidemic disease as reported in the various states during 1940. The following paragraphs summarize part of the data contained in the preliminary report.

WATER-BORNE OUTBREAKS

Bacillary Dysentery

Two of the states reported four epidemics of bacillary dysentery, totaling 2,683 cases. No deaths were recorded. The Flexner Y bacillus was found to be the causative organism in two, B. dysenteriae Sonne in a third outbreak.

Gastro-enteritis

Four states reported 25 epidemics of gastro-enteritis, estimated cases totaling 40,922, with two deaths.

Typhoid Fever

Nine outbreaks were reported as having occurred in eight states; cases totaled 158, including seven fatalities.

MILK-BORNE OUTBREAKS

Bacillary Dysentery

Investigation was made in two states of two outbreaks, with a total of 167 cases. Bacilli of Flexner and Sonne types, respectively, were the causative organisms.

Food Poisoning

Staphylococcus aureus was found to be the causative agent in two of five epidemics investigated in three states. Cases totaled 365, with no recorded deaths. Raw, sweet milk was the food vehicle in two instances and ice cream in the remaining three outbreaks.

Gastro-enteritis

Eight epidemics, with an estimated number of 453 cases, were reported from three states. Sweet milk in raw form was the vehicle in six of the outbreaks, buttermilk being mentioned in connection with the other two. *Staphylococcus aureus* and *albus* were isolated in two, *staphylococcus aureus* alone in a third outbreak.

Scarlet Fever

Two epidemics were reported from two states, cases numbering 30. Raw milk was found to be the vehicle of infection.

Septic Sore Throat

Three of the states reported three epidemics, totaling 452 cases. Transmission in the three instances was through raw milk.

Typhoid Fever

Fourteen epidemics, 120 cases with eight deaths, were reported from twelve states. Raw milk proved to be the vehicle of transmission in all but one of the outbreaks. Typhoid carriers, demonstrated or suspected, were mentioned as the probable source in nine instances. Included in the fourteen milk-borne epidemics of typhoid fever in 1940, was one which occurred in Audubon County, Iowa, with five cases (two deaths).

Undulant Fever

Three states reported four outbreaks, totaling nineteen cases.

OTHER FOOD-BORNE OUTBREAKS

Foods other than milk and milk products, caused 81 outbreaks of food poisoning as notified from nineteen states; estimated cases totaled 2,500. Other epidemics included eleven of typhoid fever, totaling 95 cases (nine deaths); nine outbreaks of trichiniasis with 97 cases (four deaths); 41 outbreaks of gastro-enteritis, one of paratyphoid fever, two of bacillus dysentery (about 159 cases), two of cadmium poisoning (nine cases) and one of botulism—Type B (five cases).

PREVALENCE OF DISEASE

Disease	Nov. '41	Oct. '41	Nov. '40	Most Cases Reported From
Diphtheria	25	13	19	Polk, Scott
Scarlet Fever	166	177	293	For the State
Typhoid Fever	3	15	3	Boone, Cerro Gordo
Smallpox	3	1	2	Butler, Clarke
Measles	81	74	126	Boone, Greene, Story
Whooping Cough	81	98	108	Calhoun, Dallas, Dubuque, Woodbury
Brucellosis	45	52	12	Cherokee
Chickenpox	271	100	362	Dubuque, Des Moines, Linn, Sac
German Measles	2	2	6	Dubuque, Sac
Influenza	4	13	6	CCC Camps, Tama, Woodbury
Mumps	222	84	115	Jefferson, Mahaska, Marshall, Boone
Pneumonia	112	72	103	For the State
Poliomyelitis	4	9	32	Clayton, Dallas, Floyd, Greene
Tuberculosis	52	56	5	For the State
Gonorrhea	82	201	114	For the State
Syphilis	179	252	216	For the State

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DENNIS H. KELLY, Associate Editor.....Des Moines

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WE BEGIN ANOTHER YEAR

As a rule the JOURNAL looks forward pleasantly to the beginning of each new year when it customarily extends the greetings of the season to its readers, reviews the accomplishments and mistakes of the year just past, and anticipates the progress it hopes to record in its pages in the year to come. This year, however, the usual felicitations do not flow as readily from our pen as in previous years. Something seems to be lacking in sincerity in such expressions as "Happy New Year" when we know that for many, even in our medical group, the year ahead is going to be anything but happy, and "Peace on earth, good will to all mankind" is but a hollow mockery. No, these expressions have been replaced in the hearts of every patriotic American on this New Year's Day, 1942, with those stirring slogans "Remember Pearl Harbor" and "Remember Colin Kelly." Each citizen is resolved within himself, first to avenge the treachery of that fateful Sunday morning, and this having been accomplished, next, to see to it that "Peace on earth" shall again be restored to its full meaning.

And so we forego our usual New Year greetings, and turn our attention to the task at hand. During 1941 the JOURNAL has attempted to carry in its editorial section all pertinent information relative to medical military preparedness. From now on it will be our purpose to redouble our efforts in this direction. The special knowledge and skill possessed only by the physician, make his rôle one of extreme importance in the prosecution of this war. As of October 31, some 13,000 doctors have been on active military duty with an armed force of 1,700,000 men. Doubling or tripling the armed forces will call for a corresponding

increase in the number of doctors in the field. Industrial plants engaged in the manufacture of war implements must have adequate medical care for the workers. The medical needs of the civilian population must continue to be met fully and completely. The job of efficiently distributing the available supply of qualified physicians to meet these demands is no simple one. However, it is our understanding from Major Sam F. Seeley, executive officer of the Procurement and Assignment Service in Washington, D. C., that a well-organized workable program is already functioning smoothly in supplying the medical needs of the nation. Even so there undoubtedly will be many communications regarding policies and regulations which will be of interest and value to the physician, and these we shall try to publish as fully as possible.

Dislocations and upheavals among the medical brethren of our cities and towns is inevitable; nevertheless, the practice of medicine must go on, if not as usual, then as best it can. Committees, county medical societies and the Iowa State Medical Society will continue their scientific and business activities as always. The JOURNAL, too, with the exception that its columns will give added space to information of a military nature, will continue its endeavor to supply to its readers the same high quality of scientific material which has made it one of the outstanding medical publications of the country.

True, we face 1942 with heavy hearts because of the misery and suffering we know are coming to millions of human beings; but we face it also with courage and determination, and with the conviction that the forces of evil loose in the world must be conquered, never again to be freed to threaten the concord and harmony of a peace-loving people. Let each of us resolve that he will do his appointed task in the interests of the common good—a little more cheerfully and a little more efficiently in 1942 to the end that order may soon be restored to a world torn by disorder.

THEY ALSO SERVE

Many of our colleagues are now in military service and it is certain that in the succeeding weeks and months many more will be called. You carry the torch of liberty and the shield of medicine—we bless you.

The physician who remains at home to serve civilian needs is faced with many responsibilities to his community, a task perhaps as difficult and beset with as many sacrifices as military service. The decision as to which rôle the individual physician will assume rests with the Committee on Procurement and Assignment, and the doctors of this

land will serve their country in any capacity in which they are needed.

The first rôle of the physician who is designated to serve the civilian needs is that of example—to furnish to his constituency a model of poise and of confidence, to avoid hysteria and mongering and rumor. If he, who is perhaps closer to the hearts of men than even the priests, cracks under the duress of war and work, what can one expect of the layman? Morale is as necessary as a fighting force.

The second duty of the civilian doctor is cooperation with all the other agencies concerned with national defense, and the taking of an active part in the community in furthering constructive measures for civilian defense, public morale and public health. In addition to civic responsibilities, the physician must teach and preach nutrition, to impart to the public the necessity for a diet which includes a proper balance of the food constituents.

With the inevitable decrease in the number of physicians available for civilian needs, it is even more important for the layman to recognize his obligation to maintain an optimum state of health through the intelligent application of our knowledge concerning adequate diets and nutrition. That the public in general is still deaf to all the measures designed to accomplish this goal is attested to by the many reports in the literature concerning deficiency states. In addition, the usual duties of the doctor must be carried on, rendering modern obstetric service, caring for the sick, exerting every energy in the field of preventive medicine, giving counsel and solace and cheer.

If this is total war, and it seems apparent that this is a total war, the civilian physician will be engaged in public practice and not private practice. His rôle is to serve his community according to its needs, both as a leader in his community and as a physician.

PROCUREMENT AND ASSIGNMENT OF PHYSICIANS

A report from Major Sam F. Seeley, M. C., executive officer of the Procurement and Assignment Service, will be found on page 39. The agency he serves was organized in response to a request for it from the American Medical Association at its meeting in Cleveland last June. It has the approval and support of and a working relationship with all governmental agencies. President Roosevelt named Dr. Frank H. Lahey of Boston, chairman of its Directing Board, with Dr. Harold S. Diehl of Minneapolis, Dr. James E. Paullin of Atlanta, Dr. Harvey B. Stone of Baltimore, and Dr. C. Willard Camalier of Washington as the other members.

CIVILIAN DEFENSE A REALITY*

It is quite probable that the majority of American citizens today realize they have been too complacent about the possibility of being attacked in one form or another by enemy forces. The surprise attacks of Sunday morning, December 7, dispelled forever the idea that distance alone can be a strong enough protection. Air raid warnings have sounded on both the east and west coasts and there is no reason to believe that the middle west will enjoy an immunity the rest of the world has not had.

Civilian defense has now become an acute need, but fortunately a thorough plan of procedure has been prepared by the national Office of Civilian Defense and distributed through your Committee on Medical Preparedness to all county medical societies. The Office of Civilian Defense is headed by F. H. LaGuardia, with Dr. George Baehr acting as Chief Medical Officer. Each state also has a defense committee: in Iowa it is combined into a Commission on Industrial and Civilian Defense, with Edward A. Kimball of Des Moines acting as chairman, and Rodney Q. Selby serving as executive secretary. Governor Wilson has also appointed a local director of civilian defense in each county. Elsewhere in this JOURNAL will be found a section devoted to civilian defense; it contains a list of the county directors and a diagram of the county organization recommended by the Office of Civilian Defense in Washington. This information has already been sent to all county society secretaries, but is being reprinted so that every physician in Iowa may become familiar with the program.

The Committee on Medical Preparedness has asked Dr. Thomas A. Burcham of Des Moines to assume the responsibility of acting as liaison officer on civilian defense for the State Society. He will continue to keep the county medical societies informed of new developments and needs and will be ready to advise and counsel them.

The doctor has a double rôle in civilian defense. He should be interested in it primarily as a citizen, and secondarily as a physician. A chief of emergency medical services is to be appointed in each county. His duties are numerous, and because of their importance, they are given in detail in the section of the JOURNAL previously mentioned.

The initial step in organization of civilian defense must come from the local director, but the full support of the medical society should be given to the project. The medical profession in Iowa has been a leader in solving many problems; it will not fail now.

*From the Committee on Medical Preparedness.

THE INCIDENCE OF COMMUNICABLE DISEASES IN MILITARY SERVICE

Bacteria may be more deadly than guns and armed forces in time of war. In fact, during World War I communicable diseases occasioned more hospital admissions, resulted in more deaths and were responsible for more days lost from duty than injuries received in line of duty. One in every three soldiers and sailors had one or more of the communicable diseases, and one in every 133 in the service succumbed to one of the infectious diseases.

The record of morbidity and mortality rates of communicable diseases in the United States Army during the last war is so significant it seems wise to review the figures.

Disease	Number	Deaths	Fatality	Case
Influenza	783,895	24,575	3.14	
Venereal Diseases	356,151	170	0.05	
Mumps	229,680	0	0.0	
Measles	96,817	2,367	2.45	
Pneumonia	77,911	19,091	24.50	
Tuberculosis	38,071	2,744	7.21	
German Measles	17,039	82	0.48	
Malaria	14,111	31	0.22	
Scarlet Fever	11,673	354	3.03	
Diphtheria	10,907	177	1.62	
Meningitis	4,826	1,833	37.98	
Typhoid Fever	1,527	227	14.86	

Although influenza and pneumonia were responsible for most of the illnesses and deaths, one-half million soldiers and sailors were affected by diseases which in civilian life are, for the most part, confined to children. Mumps and measles were the bane of the army camp, and isolation and quarantine rendered a vast number of exposed soldiers ineffectual for training or combat duty.

In the present conflict it would seem advisable to provide each camp with a physician properly qualified in modern public health administration. Not only should the accepted prophylactic immunization against smallpox, typhoid and paratyphoid fever, diphtheria and tetanus be employed, but in the event of exposure to measles, passive immunity should be conferred upon the exposed non-immune by the administration of convalescent serum or immune globulin, and in scarlet fever exposure, by the injection of convalescent serum. Strict isolation and quarantine should be rigorously enforced. The routine chest x-ray should screen out reinfection tuberculosis among selectees.

The increase in knowledge of the various diseases which has occurred since 1919, the use of the sulfonamides, and the experience gained in the last war should very materially reduce the incidence and the mortality rates of communicable diseases in the military personnel in the present war.

OLD AGE ASSISTANCE GRANTS

The following communication from Dr. Harold J. McCoy and Dr. Channing G. Smith, medical director and medical consultant, respectively, of the Iowa State Board of Social Welfare, calls attention of Iowa physicians to a very important matter. Approximately one-fourth of all the money being received by 14,121 old age pensioners is being expended for chronic medical treatment. This amounts to some \$600,000 yearly, and is steadily increasing. The medical directors are rightfully concerned that the money for medical treatment for this group of deserving citizens be spent wisely and where it is actually needed. They ask, therefore, that doctors who have patients in this group under their care exercise an increased amount of judgment in their estimation of the actual medical needs for the aged. The JOURNAL heartily approves of this attitude, particularly now when every dollar should be expended to its last cent of usefulness. We hope our readers will study carefully the following report and will wholeheartedly cooperate with Drs. McCoy and Smith in their efforts to improve the administration of the old age funds for medical relief.

"On October 1, 1941, 14,121 old age recipients were receiving, through the Iowa State Board of Social Welfare, an extra grant for the treatment of chronic illnesses. The average sum so allotted is \$3.33 per person per month and the grant continues until the case is reinvestigated. The added information received at the reinvestigation serves to determine whether the individual monthly allotment should be continued, discontinued, raised or lowered. The 14,121 persons now receiving a sum for chronic medical treatment represent approximately 25 per cent of all old age recipients in Iowa. The percentage of recipients who will eventually receive a medical allowance is as yet problematical. We do know that this percentage has increased from 17 per cent on January 1, 1941 to 25 per cent on October 1, 1941.

"Studies show that 40 per cent of all persons reaching the age of sixty-five years have a definite physical ailment and the number rapidly increases as the higher age brackets are reached. Our own belief is that, in time, from 35 to 40 per cent of all old age recipients may qualify for chronic medical assistance. It is the duty of the medical department of the State Board of Social Welfare to study each medical report received together with the information sent in by the county investigator. From these reports we decide upon the amount of money necessary to treat the diagnosed

disease for one year. The medical grant is divided into twelve equal monthly allowances. The sum is predicated upon the use of the most simple remedies compatible with efficiency and with the indigent fee bills as used in the respective counties.

"Under these restrictions it is our obligation to pay the actual necessary medical expense in chronic medical illnesses up to the maximum of \$5.00 per month. It is our desire to do this. To accomplish it we are asking the help of all doctors. We are not receiving many complaints that we have allowed insufficient sums in certain cases, and conversely we are not receiving enough letters that we have allowed too much in others, nor information about the recipients who are not using their allowance for medical service.

"It is not a rule nor a regulation but a federal law that all monies must be paid to recipients unconditionally. This means that we cannot insist upon the medical allotment being used only for medical supplies, drugs and medical services. However, it is the intent of the Iowa law that this extra grant should be used for the treatment of chronic conditions. Therefore, if a recipient does not use this portion of his assistance properly it is assumed that medical services are not needed and the extra grant is discontinued. At the present time more than \$600,000 is being expended each year in the medical program and the amount is increasing monthly. This is a large sum of money and again we ask your help in expending it wisely.

"Too many of you, evidently out of sympathy for the aged, are filling out medical reports when no treatment is indicated; you are asking too much for minor conditions and you are ignoring the fact that many chronic illnesses do not require continued treatment. Often doctors do not realize that the extra monthly medical allowance extends for a year or sometimes longer. We are particularly proud of the number of doctors who are refusing to fill out reports for recipients who do not need treatment, and of those who inform us that we have allowed too much or that the patient has recovered and no further allotment is needed.

"To keep the records straight it is necessary that you send all information concerning old age recipients through your county office. If you have any suggestions for improving this medical program you may be sure they will be gratefully received."

Harold J. McCoy, M.D., Medical Director.
Channing G. Smith, M.D., Medical Consultant.

FIFTH ANNUAL INTERPROFESSIONAL PROGRAM

We take pleasure in presenting the following program for the Fifth Annual Meeting of the Iowa Interprofessional Association which is being presented this year in conjunction with the annual meeting of the Iowa Veterinary Medical Association. The subject is one of great interest to all Iowans in view of the recent midwestern epidemic of encephalitis and encephalomyelitis. Dr. H. D. Bergman of Ames is a widely known member of the faculty of Iowa State College, and Dr. James P. Leake of the United States Public Health Service and Dr. Adolf Eichhorn of the Bureau of Animal Industry are equally outstanding in their respective fields. Discussion is to be open to those present so that questions may be asked.

All doctors in Iowa are invited and urged to attend this meeting. It is not always an easy matter to plan a program which will be of interest to the five professions comprising this association, but the subject chosen and the distinguished men who appear on the program should attract a large number of physicians.

**Fifth Annual State Meeting
Iowa Interprofessional Association
Tuesday Afternoon, January 27, 1942
Hotel Fort Des Moines
Des Moines, Iowa
Main Ball Room**

Symposium on Encephalitis—Encephalomyelitis

Opening Remarks	1:30 p. m.
Mr. L. L. Eisentraut, Des Moines, Iowa, President Iowa Interprofessional Association	
Address: Interprofessional Relations and Co-operation	1:45 p. m.
H. D. Bergman, D.V.M., Ames, Iowa, Iowa State College	
Address: Encephalitis—Informal discussion of Recent Midwestern Epidemic..	2:00 p. m.
James P. Leake, M.D., Washington, D. C., United States Public Health Service	
Address: Encephalomyelitis	3:00 p. m.
Adolf Eichhorn, D.V.M., Beltsville, Maryland, Director of Animal Disease Station, Bureau of Animal Industry	

DR. BURCHAM APPOINTED

At a meeting held December 17, 1941, Dr. Thomas A. Burcham of Des Moines was elected Chairman of the State Medical Advisory Council for Civilian Defense, a subcommittee of the State Industrial and Defense Commission. Dr. Burcham assumed his duties at once.

CIVILIAN DEFENSE SECTION

The magnitude of the problem of civilian defense warrants this special section in the JOURNAL explaining the rôle of the medical profession in this important phase of national defense. In this section will be found the list of local county directors of civilian relief appointed by Governor Wilson. It is the responsibility of the local director to appoint a chief of emergency medical service in consultation with the county medical society. Appointments have already been made in thirty counties, and it is hoped that they will be completed in all counties within a very short time.

I. LOCAL DIRECTORS OF CIVILIAN DEFENSE

County	Chairman
Adair.....	Marion G. Kellam, Greenfield
Adams.....	Ed Fackler, Jr., Corning
Allamakee.....	Fred Intelkofer, Waukon
Appanoose.....	Jas. H. Adamson, Centerville
Audubon.....	L. C. Bagley, Audubon
Benton.....	Jas. H. Milroy, Vinton
Black Hawk.....	H. T. Wagner, Waterloo
Boone.....	Kenneth Goodrich, Boone
Bremer.....	G. O. Vanderveer, Waverly
Buchanan.....	L. G. Dodge, Independence
Buena Vista.....	Harold Stanton, Storm Lake
Butler.....	Maurice B. Jones, Allison
Calhoun.....	Marion McCauley, Lake City
Carroll.....	Ray M. Moehn, Carroll
Cass.....	Boyd M. Cambridge, Atlantic
Cedar.....	Wm. B. Anderson, West Branch
Cerro Gordo.....	W. Earl Hall, Mason City
Cherokee.....	John F. Loughlin, Cherokee
Chickasaw.....	George C. Murray, New Hampton
Clarke.....	John M. Grimes, Osceola
Clay.....	John Sieh, Spencer
Clayton.....	J. J. Matthews, Strawberry Point
Clinton.....	George Delaney, Clinton
Crawford.....	Floyd E. Page, Denison
Dallas.....	Curtis Gregory, Adel
Davis.....	Howard R. Wilson, Bloomfield
Decatur.....	David A. Dancer, Lamoni
Delaware.....	J. N. Whisler, Manchester
Des Moines.....	Carl C. Riepe, Burlington
Dickinson.....	H. E. Narey, Spirit Lake
Dubuque.....	Paul Smith, Dubuque
Emmet.....	Dr. J. B. Knipe, Armstrong
Fayette.....	Robert F. Estey, West Union
Floyd.....	W. G. Henke, Charles City
Franklin.....	Ralph R. Stuart, Hampton
Fremont.....	Hugh S. Jackson, Sidney
Greene.....	H. Dale Harding, Jefferson
Grundy.....	Vic. F. Sieverding, Grundy Center
Guthrie.....	A. D. Sayre, Guthrie Center
Hamilton.....	J. Frank Webb, Webster City
Hancock.....	Dr. George Bemis, Garner
Hardin.....	George R. Stauffacher, Eldora
Harrison.....	Will Wolters, Little Sioux
Henry.....	Warren K. Rogers, Mt. Pleasant
Howard.....	Dale Elwood, Cresco
Humboldt.....	Elmer Lindhart, Humboldt
Ida.....	Ed. Campbell, Battle Creek
Iowa.....	R. E. Jones, Williamsburg
Jackson.....	Harold Spiro, Bellevue
Jasper.....	James R. Rhodes, Newton
Jefferson.....	Roscoe P. Thoma, Fairfield
Johnson.....	Kenneth M. Dunlop, Iowa City
Jones.....	Charles L. Niles, Anamosa
Keokuk.....	Henry F. Wagner, Sigourney
Kossuth.....	Fred Kent, Algona
Lee.....	J. A. Hollingsworth, Keokuk
Linn.....	Edward E. Lowe, Cedar Rapids
Louisa.....	Ed R. Hicklin, Wapello
Lucas.....	A. J. Schuholt, Chariton
Lyon.....	J. T. Dykhouse, Rock Rapids
Madison.....	Shirley A. Webster, Winterset
Mahaska.....	J. C. Eichhorn, Oskaloosa
Marion.....	Joe H. Johnson, Knoxville
Marshall.....	O. H. Albee, Marshalltown
Mills.....	H. A. Darting, Glenwood
Mitchell.....	Richard C. Carr, Osage
Monona.....	W. E. Nye, Onawa
Monroe.....	Elbert Martin, Melrose
Montgomery.....	Thomas D. Murphy, Red Oak
Muscatine.....	L. R. McKee, Muscatine
O'Brien.....	Ed A. Leemkuil, Primghar
Osceola.....	Harold E. Scott, Sibley

In order that all physicians in Iowa may become familiar with the organization of civilian defense, a chart is included in the section showing the different agencies involved and their interworking responsibilities. Also included is a memorandum covering the duties of the chief of emergency medical services. Finally, an article describing the probable operation of first aid and casualty stations and the supplies which should be provided for them is reprinted from the *Journal of the American Medical Association*, issue of November 22, 1941.

County	Chairman
Page.....	E. C. Fishbaugh, Sr., Shenandoah
Palo Alto.....	Walter G. Middleton, Emmetsburg
Plymouth.....	James C. Gillespie, Le Mars
Pocahontas.....	F. E. Van Alstine, Pocahontas
Polk.....	Mark L. Conkling, Des Moines
Pottawattamie.....	C. A. Bowers, Council Bluffs
Poweshiek.....	Charles K. Needham, Grinnell
Ringgold.....	Billie Finch, Mt. Ayr
Sac.....	Don G. Mullan, Odebolt
Scott.....	J. S. Kimmel, Davenport
Shelby.....	George O. Hurley, Harlan
Sioux.....	Charles B. Hoeven, Alton
Story.....	Herbert E. Hadley, Nevada
Tama.....	Raphael R. R. Dvorak, Tama
Taylor.....	O. J. Kirketeig, Bedford
Union.....	W. E. Day, Creston
Van Buren.....	A. L. Doud, Jr., Douds
Wapello.....	Clyde E. Jones, Ottumwa
Warren.....	Wm. T. Hamilton, Indianola
Washington.....	Edmund D. Morrison, Jr., Washington
Wayne.....	C. L. Neely, Corydon
Webster.....	Verne E. Hale, Fort Dodge
Winnebago.....	Dudley Weible, Forest City
Winneshiek.....	J. A. Nelson, Decorah
Woodbury.....	Van W. Hammerstrom, Sioux City
Worth.....	Leon S. Barnes, Northwood
Wright.....	Maurice F. Birdsall, Clarion

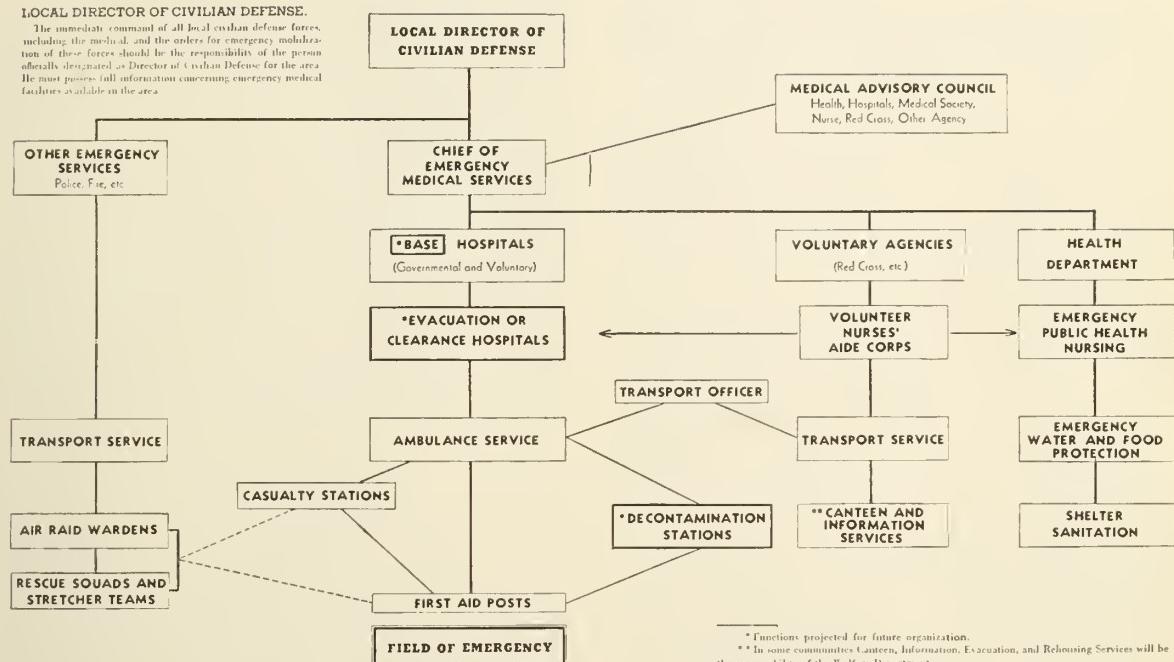
II. DUTIES OF THE LOCAL CHIEF OF EMERGENCY MEDICAL SERVICES

In order to expedite the organization of the Emergency Medical Services and provide for their effective administration, it is important that each local Civilian Defense Council appoint without delay a local Chief of Emergency Medical Services. He should be an outstanding medical leader and should be selected in consultation with the State Defense Council, the local medical society, and the local health officer. To facilitate the integration of all local medical resources into a comprehensive program for civilian protection, the local Chief of Emergency Medical Services should be assisted by a Medical Advisory Council, consisting of the local health officer, an experienced hospital executive, representatives of the local medical society, the local nursing profession, the American Red Cross and any participating voluntary agencies.

Under the administrative authority of the local Director of Civilian Defense the duties of the local Chief of Emergency Medical Services are:

1. To determine the scope of the activities of all official and voluntary organizations which are

LOCAL DIRECTOR OF CIVILIAN DEFENSE.
The immediate command of all local civilian defense forces, and their check and the sole function of organization and administration of these forces should be the responsibility of the person officially designated as Director of Civilian Defense for the area. He must possess full information concerning emergency medical facilities available in the area.



* Functions projected for future organization.
** In some communities Canteen, Information, Evacuation, and Relocation Services will be the responsibility of the Welfare Department.

to participate in the emergency medical program of civilian defense, to integrate these organizations into the comprehensive local program, and to assist them in expanding their activities to the limit of their resources in personnel and equipment.

2. To assist hospitals in the locality to organize, equip and train Emergency Medical Field Units as outlined in Medical Division Bulletin No. 1, "Emergency Medical Service for Civilian Defense."

3. To inspect and select sites for the establishment of Casualty Stations.

4. To make a spot map of the locality, indicating the locations of hospitals, appropriate sites for Casualty Stations, depots for storage of stretchers, blankets and collapsible cots, and the locations of rescue squads. The map should indicate the number of Emergency Medical Squads in each hospital. Copies of the map should be supplied to Control Centers, Police and Fire Departments, Health Department, local Red Cross Chapter, State Defense Council, Regional Director, Regional Medical Officer and to all cooperating hospitals.

5. To plan and establish adequate transportation service for casualties and medical personnel in consultation with local government departments, American Red Cross and voluntary agencies.

6. To arrange with the local Control Authority for field drills of Emergency Medical Units and Rescue Squads in collaboration with police and

fire auxiliaries, disaster relief and canteen services of the American Red Cross, ambulance transport service and other civilian defense units and to supervise such drills.

7. To make an inventory of hospital beds in the locality and of the possibilities for emergency expansion in bed capacity.

8. To assist the authorities charged with preparing plans for evacuation in making an inventory of hospitals, convalescent homes, sanatoria, hotels and other structures within a radius of fifty to one hundred miles which might be used as base hospitals to which patients in city institutions could be evacuated.

9. To assist the local Central Volunteer Bureau in establishing courses for volunteers in the field of health, medical care, nursing and related activities.

10. To stimulate recruitment of volunteers for Nurses' Aid courses of the American Red Cross, assist the local Red Cross chapter in establishing Training Centers for Volunteer Nurses' Aides at appropriate hospitals and assist the Red Cross placement bureau in placing Nurses' Aides with hospitals, clinics, health departments and field nursing services after completion of training.

11. To stimulate and guide extension of First Aid training courses as widely as possible among the local population through the American Red Cross and other voluntary agencies.

12. To stimulate and guide industrial plants, business establishments and government bureaus in the locality in the training and organization of effective First Aid Detachments among the employees.

13. To collaborate with state and local health departments and through them with the Regional Sanitary Engineer in a comprehensive program for the protection of the community against emergency sanitation hazards.

14. To collaborate with local and State Defense Councils, Office of Civilian Defense, Federal Security Agency, Children's Bureau and other local, state and federal authorities in the preparation of plans for evacuation, with particular attention to the medical needs of the population under such circumstances.

15. To keep the community and particularly the members of the health and medical professions and the participating official and voluntary organizations informed of the plans and activities of the local Emergency Medical Services.

GEORGE BAEHR, M.D.,
Chief Medical Officer.

III. EQUIPMENT AND OPERATION OF EMERGENCY MEDICAL FIELD UNITS

MEDICAL DIVISION—BULLETIN NO. 2

PREPARED BY OFFICE OF CIVILIAN DEFENSE,
WASHINGTON, D. C.

The Field Casualty Service

As recommended in Bulletin No. 1 of the Medical Division, emergency medical field units should be established in all approved general hospitals, both voluntary and governmental, located in coastal states and in industrial centers of the interior. The plan of organization and size of the emergency field units for hospitals of various sizes and the total number of field units recommended on a population basis are outlined in Bulletin No. 1.

The emergency medical field units of a hospital are composed of two or more squads, so that at least one squad is on first call during each twelve hour period of the day. In larger hospitals reserve squads should be available at the call of the control center in the event that multiple sites of disaster should require the manning of additional casualty stations and first aid posts. All members of emergency medical field units should be systematically drilled in first aid procedures.

Equipment for Emergency Medical Field Units

The following lists include only the minimum medical and surgical equipment required for emer-

gency treatment at the site of a disaster. Provision for other than essential minor surgery has purposely been omitted.

The equipment for each physician and his team is to be carried in two portable boxes provided with handles. These two boxes should be of the same size (15 by 20 by 8 inches) and may be packed conveniently in the ambulance or other vehicle transporting the emergency squad to the site of the casualty station. The provision in separate containers of working supplies for each physician will permit the squad of a casualty station to split off one or more teams of physicians and assistants who can be dispatched with their equipment to set up advanced first aid posts.

Casualty Stations

The casualty station will occupy a predetermined site such as the clinic of a hospital, health department or voluntary agency, a health center or substation, a school basement or other suitable place which provides shelter, protection and accessibility. It should be located if possible on a side street so that ambulances will not block main thoroughfares. The sites selected for casualty stations should be numbered and indicated on a spot map of the community. The casualty station will:

1. Serve as a center from which medical teams may be sent closer to the disaster if required.

2. Care for the less severely injured and for persons suffering from shock and hysteria until they may be permitted to return to their homes or to temporary shelters. This will protect hospitals from the burden of minor casualties which would interfere with the work of caring for the seriously injured.

3. Keep a record of all persons treated at the station and see that all casualties transferred to a hospital are tagged.

The casualty station is to be supplied with stretchers, collapsible cots and blankets from medical depots located at sites from which the transportation of emergency medical service is derived. Eight stretchers, twenty-four cots and sixty-four blankets should be available per 10,000 of population for issue to casualty stations as the need arises. Where kitchen tables are not available at the location of a casualty station, two pairs of saw horses, each 36 inches high, may be required, on which stretchers may be placed to serve as dressing tables. Stretcher teams and rescue squads will obtain their stretchers at casualty stations.

First Aid Posts

The first aid post will occupy a temporary location usually close to the scene of disaster and will:

- Care for the more severely injured, preparatory to their transfer to a hospital. No surgery other than emergency first aid is contemplated.

- Classify the casualties so as to expedite the transfer of the seriously injured to a hospital—a most important responsibility which requires surgical judgment.

- Direct the stream of ambulatory and of slightly injured stretcher patients and those suffering from shock or hysteria to a casualty station.

- Tag all casualties immediately. Maintain entries in the casualty record book of all persons receiving first aid. (A nurse or nurse's aide is to be responsible for these records.)

Equipment for a First Aid Post

List 1 indicates the medical and surgical equipment for each physician of an emergency medical field unit and his team of nurse and orderly or nurses' aide. One or more such teams man a first aid post. First aid posts are subsidiary to a casualty station which will furnish replacements of drugs and surgical supplies.

List 1—Equipment for a First Aid Post

(Working supply for one physician's team)

Item	No.
Cases, carrying, waterproof (15 by 20 by 8 inches).....	2
Scissors, surgical, Mayo 5½ inch curved.....	1
Scissors, surgical, Mayo 5½ inch straight.....	1
Scissors, bandage, angular, 7½ inch.....	2
Forceps, hemostatic, Rochester, curved, 6½ inch.....	6
Forceps, hemostatic, Rochester, straight, 5½ inch.....	6
Forceps, tissue, spring, 5½ inch.....	1
Forceps, tissue, spring, mouse-tooth, 5½ inch.....	1
Forceps, tongue holding, 7 inch.....	1
Tube, breathing (airway) hard rubber or metal (adult).....	1
Tube, breathing (airway) hard rubber or metal (child).....	1
Retractor, tissue, double end nested 9 and 10 inch Army type, pair.....	1
Syringe, hypodermic, Luer, 2 cc.....	2
Needles, hypodermic, 25 gage, ½ inch.....	12
Needles, hypodermic, 19 gage, 1½ inch.....	6
Tubes, constriction (length 3 inches).....	12
Stoppers for constriction tubes.....	12
Handles, Bard Parker, No. 3.....	2
Blades, Bard Parker, No. 10, package of 6.....	1
Drugs	
Morphine sulfate syrettes, 0.015 Gm.....	20
Morphine sulfate syrettes, 0.030 Gm.....	10
Sulfathiazole, powder, vials, 5 Gm.....	12
Ointment, ophthalmic, boric acid, 5% (tube, 4 Gm.).....	1
Jelly, tannic acid, tube, 45 Gm.....	2
Soap, hand, bar.....	2
Alcohol, denatured, ethyl, bottle, 500 cc.....	1
Ammonia, aromatic spirit, bottle, 60 cc.....	1
Sodium bicarbonate.....	½ lb.
Phenobarbital tablet, 0.03 Gm.....	100
Caffeine sodium benzoate, ampules, 0.5 Gm.....	12
Epinephrine hydrochloride, 1:1,000.....	20 cc.
Dressings, Bandages and so on	
Compress, gauze, 4 by 4 inches.....	100
Compress, gauze, 2 by 2 inches.....	200
Pad, surgical, 8 by 10 inches (Dakin).....	25
Bandage, gauze, 2 inch.....	24
Bandage, muslin, 4 inch.....	24
Bandage, triangular, muslin, 50 by 36 by 36 inches.....	24
Cotton, absorbent, roll, sterile.....	2 oz.
Cotton batting, roll.....	1 lb.
Plaster, adhesive, 2 inch, 10 yards, roll.....	2
Pins, safety, large.....	48

Splints, basswood	12
Depressors, tongue, wood.....	24
Applicators, wood	25
Sheeting, rubber (45 by 72 inches).....	1
Basins, white enamel, 9 by 6 by 1½ inches (one with cover).....	2
Stove, gasoline (Coleman).....	1
Pencil, indelible	1
Pencil, dermatographic (red)	1
Pads, heating, chemical.....	4
Pads, heating, refills, chemical.....	4
Gloves, surgeon's, rubber, size 8 (latex).....	2
Flashlight (two cell)	1
Lantern, electric, dry cell type.....	4
Battery, dry cell, for lantern, No. 6.....	4
Battery, dry cell, for flashlight, No. 950.....	4
Cups, paper	25
Brush, nail	1
Towels, hand	12
Matches, safety, box	3
Tourniquet, field, web	3
Bag, laundry, small	1
Tags, identification, book of 20.....	6
Casualty Record Book	1

Suture Material

Catgut, plain No. 1, tubes, boilable.....	6
Silk, dermal, medium, 40 inch strand, package.....	6
Needles, suture, catgut, size 1, ½ circle, trocar point, Mayo	6
Mayo	6
Needles, cutting edge, straight	6

Equipment for a Casualty Station

List 2 indicates the equipment for a casualty station. It contains bulky articles, such as traction splints, which could not be included in the equipment of the first aid post without impairing its mobility. These articles will be issued from the casualty station to the first aid posts as the need arises. Casualty stations are also stocked with dressings, bandages and drugs from which the supplies of the first aid posts may be replenished. Blood, plasma and biologic products such as tetanus antitoxin or toxoid may be obtained by casualty stations from the parent hospital as needed. They are, therefore, omitted from this list.

List 2—Equipment for a Casualty Station

(Emergency squad of two or four physicians, nurses and nursing auxiliaries)

Item	No.
Trunk, Army type (30 by 16½ by 12 inches).....	1
Pins, safety, large	100
Splint, basswood	30
Depressors, tongue, wood	100
Applicators, wood	50
Sheeting, rubber (45 by 72 inches).....	2
Basins, white enamel, 9 by 6 by 1½ inches (2 with cover).....	4
Gag, mouth	1
Stove, gasoline (Coleman)	2
Catheter, urethral, rubber, F. 14.....	4
Tags, identification (books of 20)	6
Pencil, indelible	4
Pencil, dermatographic (red)	4
Pads, heating, chemical	8
Refills, pads, heating, chemical	8
Gloves, surgeon's, rubber, size 8, (latex)	4
Cups, paper	50
Brush, nail	2
Matches, safety, package of 12 boxes	1
Towels, hand	24
Lantern, electric, dry cell	2
Batteries, dry cell, lantern, No. 6	12
Tourniquet, field, web	6
Bag, laundry, small	2
Splint, arm, hinge, Thomas	4
Splint, leg, half-ring, Army type	4
Splint, Thomas, leg, child	2
Splint, arm, Murray Jones, child	2
Catgut, plain No. 1, tubes, boilable	12
Silk, dermal, medium 40 inch strand, package of 12	1
Needles, suture, size No. 1, ½ circle, trocar point, Mayo	12
Needles, cutting edge, straight	12
Razor, safety	1
Blades, safety razor	12

Drugs

Morphine sulfate syrettes, 0.015 Gm.	40
Morphine sulfate syrettes, 0.030 Gm.	20
Sulfathiazole, powder, vials, 5 Gm.	24
Ointment, boric acid, ophthalmic, 5% tube, 4 Gm.	2
Jelly, tannic acid, tube, 45 Gm.	4
Alcohol, denatured, ethyl, 70%	1 qt.
Ammonia aromatic spirit, bottle, 60 cc.	1
Caffeine sodium benzoate, 0.5 Gm. ampules.	24
Phenobarbital, 0.03 Gm.	200
Procaine hydrochloride tablets, 0.18 Gm.	100
Soap, hand, bar.	4
Sodium bicarbonate	1 lb.
Sodium chloride compressed tablets, 1 Gm.	100

Dressings, Bandages and so on

Compress, gauze, 4 by 4 inches.	200
Compress, gauze, 2 by 2 inches.	400
Pad, surgical, 8 by 10 inches (Dakin).	50
Bandage, muslin, 4 inch.	48
Bandage, gauze, 2 inch.	48
Bandage, triangular, muslin (50 by 36 by 36 inches).	48
Cotton, absorbent, roll.	1 lb.
Cotton batting, roll.	2 lb.
Plaster, adhesive, 2 inch, 10 yards.	4

Identification Tags

The identification tag is to be filled out by the first member of a rescue squad, stretcher team or first aid post to reach the casualty. This must be done immediately, because the patient may lose consciousness. All the required information should be recorded. Information concerning the name and address of the injured and of the "person to be notified" are important to those anxious to locate the injured person. The place where an unconscious patient was found should be noted, since this may be the only clue to his identity.

It is important to record administration of narcotics or application of a tourniquet. Further treatment given at the first aid post or casualty station should be indicated on the back of the identification tag. Warnings concerning possible internal injury, hemorrhage or skull fracture should also be noted on the back of the tag to facilitate sorting of patients on arrival at the hospital.

The tag should be affixed securely to the patient and not to clothing which might later be removed.

A set of symbols to indicate the necessity for priority treatment has been devised to facilitate sorting of patients at the hospital. These symbols should be drawn prominently on the forehead of the patient at the first aid post or casualty station with a red skin pencil:

- U Urgent—requiring priority attention.
- TK Tourniquet.
- T Indicating tetanus antitoxin has been given.
- H Internal hemorrhage.
- M $\frac{1}{4}$ Indicating $\frac{1}{4}$ grain of morphine or
- M $\frac{1}{2}$ $\frac{1}{2}$ grain given.

In addition, a casualty record book will be part of the equipment of each physician's team. A nurse or nurse's aide should be assigned the responsibility for entering a record of every patient seen. This record should include the diagnosis, treatment and disposition.

MINUTES OF MEETINGS OF STATE SOCIETY
OFFICERS AND COMMITTEES

Meeting of the Board of Trustees

December 7, 1941

The Board of Trustees of the Iowa State Medical Society met in the central office Sunday morning, December 7, 1941, at 9:00 a. m. with the following persons present: Doctors O. J. Fay of Des Moines, L. R. Woodward of Mason City and John I. Marker of Fort Leonard Wood, trustees; Robert L. Parker and Harold J. McCoy of Des Moines, secretary and treasurer.

Meeting was called to order by the chairman; minutes were read and approved; bills were authorized; and the following business transacted; awarded contract for publication of JOURNAL to the Wallace-Homestead Company of Des Moines; voted to continue broadcast of music in conjunction with Speakers Bureau radio talks until April 15, 1942; voted to waive dues for physicians in military service when the county societies did likewise; established the budget for 1942; discussed a change in the size and contents of the Handbook and referred both matters to the Council for its advice; and instructed the treasurer to buy \$1,000.00 of Series G Defense Bonds. Meeting adjourned at 11:30 a. m.

Meeting of the Tuberculosis Committee

December 11, 1941

The Tuberculosis Committee of the Iowa State Medical Society met in the central office Thursday, December 11, 1941, at 1:30 p. m. with the following persons present: Doctors J. C. Painter of Dubuque, R. J. Harrington of Sioux City, H. E. Stroy of Osceola, and John Russell of Des Moines, from the Committee; and Doctors Walter L. Bierring and C. K. McCarthy from the State Department of Health. The committee approved the extended program of the Tuberculosis Division of the State Department of Health and referred it to the Council with a recommendation for its approval. It also approved the tuberculosis section of an industrial health program submitted by the State Department of Health. The third item of business was a discussion of the program for 1942, and it was decided to ask each county society to have one paper a year dealing with tuberculosis. Meeting adjourned at 3:00 p. m.

Meeting of the Council

December 14, 1941

The Council of the Iowa State Medical Society met at the Hotel Fort Des Moines in Des Moines Sunday, December 14, 1941, with the following persons present: Doctors L. L. Carr of West Union, C. H. Cretzmeyer of Algona, J. B. Knipe of Armstrong J. E. Reeder of Sioux City, E. F. Beeh of Fort Dodge, C. W. Ellyson of Waterloo, H. A. Householder of Winthrop, R. C. Gutch of Chariton, J. G. Macrae of Creston, and M. C. Hennessy of Council Bluffs, Councilors; Doctors W. L. Bierring and C. K. McCarthy and Mr. Paul J. Houser of the State Depart-

ment of Health; Mrs. A. V. O'Brien of the Women's Field Army; Doctors Earl B. Bush, president, and Robert L. Parker, secretary.

The meeting was called to order by Dr. Reeder, chairman, at 11:10 a. m. and minutes of the previous three meetings were read and approved as corrected. Business transacted was as follows: Mrs. O'Brien asked for better cooperation from county cancer chairmen and explained the difficulty her organization was having; the industrial health program of the State Department of Health was discussed but owing to events of Sunday, December 7, it needed revision, and action was postponed until a corrected program can be sent to all councilors for a vote by mail; the extended program of the Tuberculosis Division of the State Department of Health as approved by the Tuberculosis Committee was also approved by the Council; the change in size and contents of the Handbook referred to the Council for consideration by the trustees was approved; and the recommendation of the Life Membership Committee made at the annual meeting was approved and sent to the Committee on Constitution and By-laws with a recommendation that it be brought up for a second reading at the 1942 session. The meeting adjourned at 12:45 p. m.

Meeting of the Medical Preparedness Committee
December 17, 1941

The Medical Preparedness Committee of the Iowa State Medical Society and many of the county chairmen on medical preparedness met in Younkers Tea Room in Des Moines Wednesday, December 17, 1941, at 9:00 p. m. to confer with Major Sam F. Seeley, M. C., of Washington, D. C. Major Seeley is the executive officer of the Procurement and Assignment Service of the Office of Defense Health and Welfare Services.

The primary objective of the Procurement and Assignment Service is to maintain a complete list of all physicians, dentists and veterinarians of the entire country with detailed information as to age, physical condition, professional qualifications, and availability for service in the various military, civil and industrial agencies of the country. The medical part of the information was obtained from the questionnaires filled in by all physicians in the summer and fall of 1940. Iowa had an almost one hundred per cent response to the questionnaires.

All agencies of the government which utilize the services of physicians, dentists and veterinarians will come to the Procurement and Assignment Service for personnel. The staff will select those physicians who fill the requirements and give the list to the requesting agency, which will then write the physicians to ask if they are available for service. In this way each physician will be fitted as nearly as possible into the work he is best qualified to do.

The Procurement and Assignment Service will also take into account the classifications made a year ago by the county committees on medical preparedness. At that time the committees made a

list of physicians considered essential for the welfare of the county, and a list of those who could be spared for military service. All of this information has been given to the Procurement and Assignment Service and will be reflected in its provision of names of available physicians to the governmental agencies. In this work, too, Iowa physicians have done their part and the classification is complete. A committee will be set up in each Corps Area to make the final decision on whether a doctor is essential to his community or can be spared for service. Representatives of medical education, hospitals, the national medical preparedness committee, and at least two well-known practitioners of that territory who are acquainted with the professional people and the needs of the area, will comprise this committee.

According to Major Seeley over fifty per cent of the doctors sending in the first 150,000 questionnaires stated they would be willing to volunteer their services in case of war. Under the present emergency it is anticipated that the majority of all physicians will be glad to serve in the capacity for which they are best fitted, whether military or civilian. It is the hope of the Procurement and Assignment Service that enough professional people will volunteer to meet the needs of the various branches of our armed forces, so that the Service may turn its attention to preventing dislocation of community medical services. Possibly within sixty days every physician, dentist and veterinarian in the country will receive a questionnaire asking him to state his first, second, third and possibly more choices as to service. The army, the navy, the public health service, the veterans' facilities and many defense industrial plants need doctors. Very shortly a set of standards for each service will be published, giving the outside limits of physical condition under which physicians will be accepted. Doctors desiring to volunteer may study the requirements and make their application in the branch in which they can best qualify. Doctors are urged to volunteer their services if they are not needed in their home community. They may learn from their local committee on medical preparedness their probable classification and be guided by it. It is obvious that more doctors can be spared from larger communities than from rural areas. Doctors who hold reserve commissions who are deemed essential to the community should transfer from the active to the inactive reserve, so that the list of reserve officers will reflect only those who are available for service.

Major Seeley stressed the fact that the Procurement and Assignment Service is strictly a civilian agency to which government agencies will come for help. There is no legal obligation on its part in providing the names of physicians meeting certain requirements. The requesting agencies will write the physicians asking if they will volunteer, and the decision will be left to the physician. Major Seeley also gave many facts and figures too lengthy to be included in the minutes which were interesting to his audience. The meeting adjourned about 10:30 p. m.

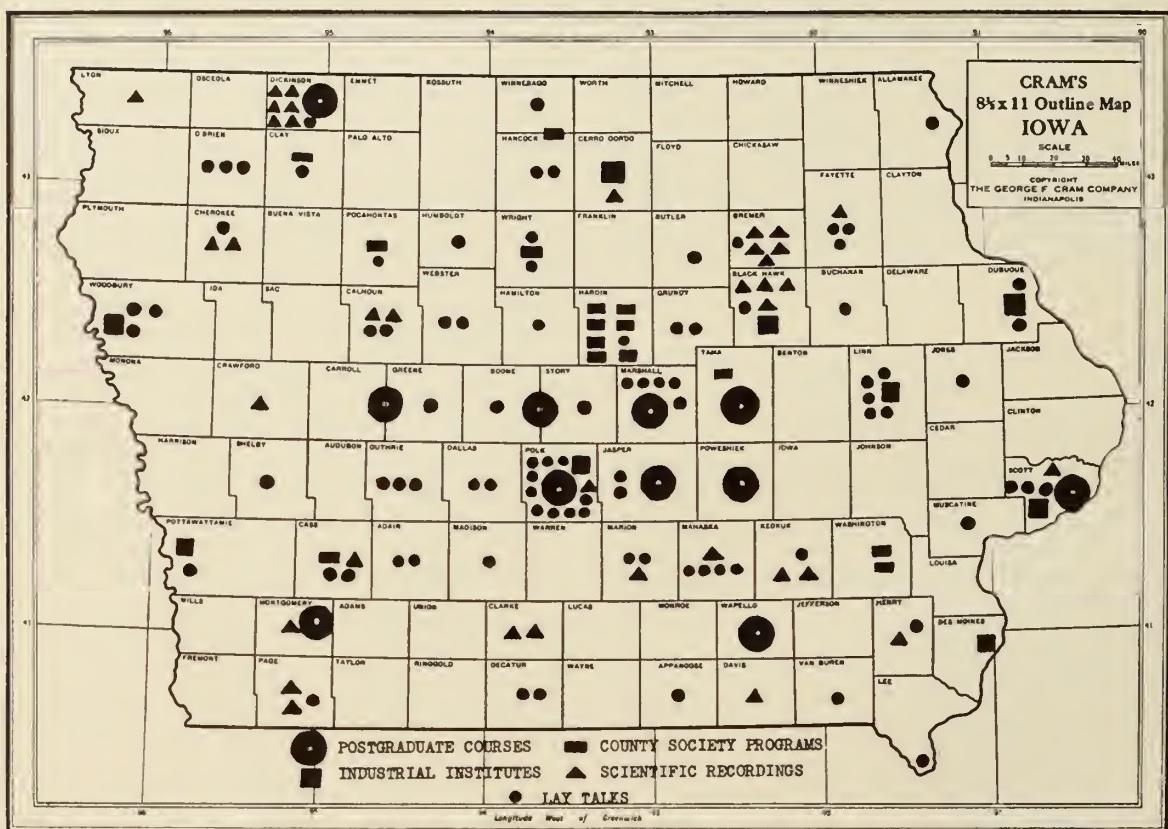
SPEAKERS BUREAU ACTIVITIES

A REVIEW OF OUR WORK

The following map depicts graphically the various activities of the Speakers Bureau during the past year. It will be noted that the services have extended to practically every section of the state, and it is only through the splendid cooperation of all Iowa physicians that this work can be carried on successfully. The Committee is deeply grateful to those who have so enthusiastically supported the Bureau and wishes to extend its sincere thanks to each and every one.

meetings and medical clubs. The response of the medical groups utilizing this service has been very gratifying to the Committee. The smaller organizations are especially pleased to have the opportunity to hear men nationally known in their particular field of medicine and welcome this type of postgraduate medical instruction.

A new project will be noted on the map—that of industrial institutes. The Division of Industrial Hygiene of the Iowa State Department of Health, in cooperation with the Speakers Bureau and Committee



Eleven postgraduate medical courses were held during the year, including one which began in the fall of 1940. The courses were comprised of 70 post-graduate medical lectures, and records show there were approximately 5,440 physician hours of post-graduate medical instruction.

Ninety-one medical talks were given before various lay organizations throughout the state, such as women's clubs, parent-teacher associations and service clubs.

During the year 15 requests were received from county medical societies for the assistance of the Bureau in procuring speakers. However, a total of 36 scientific recordings were sent out over this period, 20 of which were for county medical society meetings. The remaining 16 were for hospital staff

on Industrial Health of the Iowa State Medical Society, sponsored nine special institutes on industrial hygiene in key cities over the state. Each institute was comprised of an afternoon and evening session with leading authorities speaking on industrial hygiene, industrial health and occupational diseases. Many physicians throughout the state attended these meetings and heard the latest thought on occupational health.

Another activity which is not recorded on the map, but which is a rather important portion of the Speakers Bureau work, is that of the weekly radio talks over WOI and WSUI. Fifty-two talks were broadcast, and 1,711 copies of the manuscripts were mailed out in response to requests received. This is an increase of approximately seventy-five per cent in

number of talks requested by the radio listeners, which is believed due to the fact that early in the year the broadcast over WOI was lengthened to thirty minutes and the medical talk incorporated in a program of organ music. An announcement concerning smallpox has been made in conjunction with each broadcast during the year in an effort to reduce the incidence of smallpox in Iowa. In response to inquiries received from the listening audience, approximately 300 bulletins concerning the disease have been sent out.

"WHEN BOBBY GOES TO SCHOOL"

The Speakers Bureau and the Maternal and Child Health Division of the State Department of Health are cooperating in an effort to familiarize the physicians in the state with the film, "When Bobby Goes to School." This is an educational sound motion picture film depicting the essentials of a thorough health appraisal of a school-aged child. It was produced for the American Academy of Pediatrics by Mead Johnson and Company of Evansville, Indiana. This sixteen millimeter film requires twenty-five minutes for showing. The Academy has also produced a brochure, based upon the film but in greater detail, which is distributed to physicians viewing the film.

One of the objectives of modern preventive medicine is regular medical service for well children throughout the years of childhood when growth and development are of so much importance. Well done health examinations encompass more than an estimation of physical status; they include all phases of health—mental, emotional, nutritional and the status of protection against disease—as well as

physical well being. The purpose of the film and brochure is to stimulate interest among parents and physicians in increasing the number of children who receive thorough health appraisals at regular intervals.

Any county medical society interested in viewing this motion picture should communicate with the Speakers Bureau, allowing sufficient time for securing the film from the Mead Johnson Company. In each instance the movie will be presented by a well known pediatrician, who will also discuss various pediatric problems and answer any questions which may arise. There will be no charge in connection with a meeting of this type and it is hoped that several societies will take advantage of the opportunity in order that many of the physicians in the state may become acquainted with the film and receive the benefits of the valuable brochure.

RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

Jan. 7-9 Winter Health Hazards—

Howard G. Ellis, M.D.

Jan. 14-16 Indigestion—

Kendrick Smith, M.D.

Jan. 21-23 Pneumonia—

John D. Conner, M.D.

Jan. 28-30 Arthritis—

James W. Graham, M.D.

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF JANUARY

Marshalltown Hotel Tallecorn 6:00 p. m.	January 6	Treatment of Diabetes Walter H. Nadler, M.D., Chicago
Grinnell Hotel Monroe 6:30 p. m.	January 13	The Use of the Gastroscope in the Diagnosis of Gastric Lesions William D. Paul, M.D., Iowa City
Boone Holst Hotel 6:30 p. m.	January 29	Pulmonary Tuberculosis (Differential Diagnosis and Treatment) Karl J. Henrichsen, M.D., Chicago

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF JANUARY

Cedar Falls Sartori Hospital 6:30 p. m.	January 6	Office Gynecology Joseph L. Baer, M.D., Chicago
Atlantic Atlantic Hospital 6:00 p. m.	January 8	Care of the Premature Infant Julius H. Hess, M.D., Chicago

WOMAN'S AUXILIARY NEWS

MRS. H. I. MCPHERRIN, *Chairman of Press and Publicity Committee*
5822 North Waterbury Road, Des Moines

President—MRS. W. R. HORNADAY, Des Moines
President Elect—MRS. F. W. MULSOW, Cedar Rapids
Secretary—MRS. M. J. MOES, Dubuque
Treasurer—MRS. A. E. MERKEL, Des Moines

OUR HONOR ROLL

The war affects all of us to a greater or lesser degree. However, we are particularly conscious at this time of those of our Auxiliary members whose families are separated because husbands, fathers or sons have been called into service. These members are really feeling the stress and strain of war. Such women are truly called into the service of their country, as well as their men who are sent to distant places. It becomes their duty to maintain a home alone, to double their efforts in behalf of their children, to keep up family morale, and to approach normalcy as much as possible. We honor such women. Their courage, fortitude and service, despite their lonely hearts, commend them to all of us. They set a brave example for others to follow. During our country's dark hour, may none of us falter in our duty.

Cass County

The Woman's Auxiliary to the Cass County Medical Society met at the Pullan Hotel in Atlantic Friday, November 14, for a six-thirty dinner with the doctors. Dr. Richard Young of Omaha, Nebraska, spoke on "Psychiatry."

Mrs. R. M. Needles, President

Madison County

Mrs. I. K. Sayre of St. Charles furnished the program for the Woman's Auxiliary to the Madison County Medical Society at a meeting held Monday, November 17, at the Uptown Cafe in Winterset. Her subject was "Current Medical Legislation."

Mrs. C. B. Hickenlooper, Secretary

BOOK NOTES

In answer to parents seeking a recognized book on marriage to give to their children or any others who might wish such a book, we recommend Gilbert Applehof's *You Can Be Happily Married*. As founder of the Modern Marriage Clinic Mr. Applehof has incorporated his knowledge and experience into this practical guide to marriage for the married and unmarried and for those who advise them.

A new book of especial interest to women is W. C. Danforth's (M.D.) *A Woman's Health* in which he describes the normal bodily processes from menstruation to menopause. The chief value of the

book lies in his emphasis on danger signals which define diseases that may be prevented.

There are several new books on child care most deserving of mention. *Essentials of Child Psychology* by C. E. Skinner of New York University and P. L. Harrison of Bucknell University is the coordinated study of fourteen famous professors of psychology and education. The book is a text prepared for students, teachers and parents. The normal and abnormal are discussed in detail as well as the influence of heredity and environment and progressive education.

Jean L. Aaberg has written a rollicking little book for young mothers, *Babies Are Fun*, in which she explodes many pompous precedents, gives good scientific advice, and shows the mother that her child need not overwhelm her.

Leo Kanner in his book, *In Defense of Mothers*, points out the common faults of mothers in general, and pleads for common sense. He is associate professor of psychology and director of the Children's Psychiatric Service at Johns Hopkins Hospital and has earned the right to be practical, constructive and entertaining.

Allied to the above title is B. I. Beverly's (M.D.) *In Defense of Children*. Dr. Beverly is chief of the Pediatrics Behavior Clinic at Rush Medical College, Chicago. His book is another common sense guide to rearing children from birth to adolescence.

Your Child Meets the World Outside by Elizabeth Boettiger is an unusual approach in child psychology in that it shows how children should be taught to meet the worlds of nature, machinery, people and the community.

Mrs. K. M. Chapler

SPEAKERS BUREAU

RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

- | | | |
|------------|-----------------------|-----------------------|
| Jan. 7-9 | Winter Health Hazards | Howard G. Ellis, M.D. |
| Jan. 14-16 | Indigestion | Kendrick Smith, M.D. |
| Jan. 21-23 | Pneumonia | John D. Conner, M.D. |
| Jan. 28-30 | Arthritis | James W. Graham, M.D. |

SOCIETY PROCEEDINGS

Black Hawk County

Dr. John L. Kestel of Waterloo was named president-elect of the Black Hawk County Medical Society at the annual meeting of that organization held in Waterloo, Tuesday, December 16. Dr. Edward W. Thielen, current president-elect will assume his duties as president on January 1. Other officers elected to serve during 1942 are: Dr. Kendrick A. Smith, vice president; Dr. Craig D. Ellyson, secretary; Dr. George C. Murphy, treasurer; Dr. Emery E. Magee, delegate; and Dr. Thomas F. Thornton, alternate delegate. All officers are of Waterloo.

Bremer County

The combined monthly meeting of the Bremer County Medical Society and staff of St. Joseph Mercy Hospital was held at the Fortner Hotel in Waverly, Monday, November 24. The program consisted of motion pictures on Encephalomyelitis and the Control of Poultry Diseases.

The annual dinner of the society was held at the Nurses Home in Waverly Monday, December 8, with Lester R. Dragstedt, M.D., professor of surgery, University of Chicago, the School of Medicine, speaking on Recent Advances in Treatment of Cancer of the Gastro-intestinal Tract.

O. S. Blum, M.D., Secretary.

Butler County

The Butler County Medical Society held its annual election of officers Monday, December 8, with the following results: Dr. Floyd A. Rolfs of Aplington, president; Dr. John G. Evans of New Hartford, vice president; Dr. Bruce V. Andersen of Greene, secretary and treasurer; Dr. Bruce Ensley of Shell Rock, delegate; and Dr. Evans, alternate delegate.

Calhoun County

Harold C. Habein, M.D., of the Mayo Clinic, Rochester, Minnesota, was the speaker of the evening for the meeting of the Calhoun County Medical Society held in Rockwell City, Tuesday, November 18. Dr. Habein spoke on Medical Emergencies.

Officers for 1942 were elected at a meeting held Tuesday, December 16, in Rockwell City, as follows: Dr. Joseph J. Weyer of Lohrville, president; Dr. Andrew V. Grinley of Rockwell City, vice president; Dr. David C. Carver of Rockwell City, secretary and treasurer; Dr. Robert G. Hinrichs of Manson, delegate; and Dr. Paul W. Van Metre of Rockwell City, alternate delegate.

Cass County

The Cass County Medical Society met at the Atlantic Hotel in Atlantic, Friday, December 19, and the scientific program was furnished by Harry B. Stokes, M.D., of Omaha, Nebraska, with a paper on Bronchoscopy. The program followed a six-thirty dinner.

Cerro Gordo County

Leon S. McGoogan, M.D., assistant professor of obstetrics and gynecology, University of Nebraska, College of Medicine, Omaha, Nebraska, was guest speaker for the Cerro Gordo County Medical Society at a meeting held at the Hotel Hanford in Mason City, Tuesday, December 9. Dr. McGoogan's subject was Operative Office Gynecology.

C. O. Adams, M.D., Secretary.

Cherokee County

Officers elected to serve the Cherokee County Medical Society for the ensuing year are: Dr. Charles F. Obermann, president; Dr. James H. Wise, vice president; Dr. Donald C. Koser, secretary and treasurer; Dr. Obermann, delegate; and Dr. Lester J. Spinharney, alternate delegate. All officers are of Cherokee. The meeting was held at the Sioux Valley Hospital in Cherokee, Tuesday, December 9.

Emmet County

Dr. Smith C. Kirkegaard of Ringsted and Dr. Oscar H. Miller of Estherville, were elected president and secretary, respectively, of the Emmet County Medical Society at the annual business meeting held in Estherville, Monday, December 15.

Floyd County

The Floyd County Medical Society entertained Alexander E. Brown, M.D., of the Mayo Clinic, Rochester, Minnesota, as its guest speaker Tuesday, November 25, at a meeting held in Charles City. Dr. Brown presented a lecture on the Sulfonamides.

Franklin County

Officers elected Friday, December 5, at the Coonley Hotel in Hampton, to serve the Franklin County Medical Society during 1942 include: Dr. William R. Arthur of Hampton, president; Dr. Joseph C. Powers of Hampton, vice president; and Dr. Egmont H. Barg of Hampton, secretary and treasurer.

Greene County

The Greene County Medical Society and the Greene County Dental Society held a joint meeting at the County Hospital in Jefferson, Monday, December 8. After a six-thirty dinner, Julian D. Boyd, M.D., of the State University of Iowa, College of Medicine, Iowa City, spoke on Nutrition; and O. E. Hoffman, D.D.S., of the State Department of Health, Des Moines, showed motion picture slides.

John R. Black, M.D., Secretary.

Hardin County

Edward L. Besser, M.D., of the State University of Iowa, College of Medicine, Iowa City, furnished the program for the Hardin County Medical Society, Tuesday, November 25. Dr. Besser spoke on the Treatment of Burns. The meeting was held at the Princess Cafe in Iowa Falls.

W. E. Marsh, M.D., Secretary.

Jasper County

Officers elected at the annual meeting of the Jasper County Medical Society held at the Skiff Memorial Hospital in Newton, include: Dr. Herbert W. Canfield of Baxter, president; Dr. J. A. William Johnson of Newton, vice president; and Dr. Leon P. Adams of Newton, secretary and treasurer.

Johnson County

The Johnson County Medical Society met in regular session Wednesday, December 3, at the Hotel Jefferson in Iowa City. After the six-thirty dinner, Stuart C. Cullen, M.D., from the Department of Anesthesia, presented a lecture entitled Asleep in the Deep, which was discussed by George H. Scanlon, M.D., and Edward L. Besser, M.D., both of Iowa City. The annual election of officers resulted as follows: Dr. Arthur Steindler, president; Dr. James A. Greene, vice president; Dr. Adolph L. Sahs, secretary and treasurer; Drs. Ewen M. MacEwen, George C. Albright and Andrew W. Bennett, delegates; and Drs. Milford E. Barnes, Paul A. Reed and William F. Mengert, alternate delegates.

A. L. Sahs, M.D., Secretary.

Lee County

The regular quarterly meeting of the Lee County Medical Society was held at Graham and St. Joseph Hospitals in Keokuk, Wednesday, December 17. The following scientific program was furnished by three members of the Mayo Clinic, Rochester, Minnesota: Present-Day Management of Varicosities and Stasis Complications of the Lower Extremities, William W. Heyerdale, M.D.; Regional Enteritis, Jacob A. Bargen, M.D.; and Malignancies of the Face and Mouth, Fred Z. Havens, M.D. Officers elected at

the annual meeting are: Dr. William M. Hogle of Keokuk, president; Dr. Frank H. Dierker of Fort Madison, vice president; Dr. Harold F. Noble of Fort Madison, secretary and treasurer; Dr. Bernard J. Dierker of Fort Madison, delegate; and Dr. Frank M. Fuller of Keokuk, alternate delegate.

H. F. Noble, M.D., Secretary.

Linn County

The next meeting of the Linn County Medical Society will be held Thursday, January 8, in Cedar Rapids. Speaker for the occasion will be M. Herbert Barker, M.D., assistant professor of medicine, Northwestern University Medical School, Chicago, who will discuss the subject of Hypertension. All members in good standing in the adjoining counties are cordially invited to attend this meeting.

R. J. Stephen, M.D., Secretary.

Marshall County

Dr. Louis F. Talley of Marshalltown was named president of the Marshall County Medical Society at the annual meeting of the organization held Tuesday, December 2, at the Hotel Tallecorn in Marshalltown. Other officers include Dr. John E. Sinning of Melbourne, vice president; Dr. Russell M. Wolfe of Marshalltown, secretary and treasurer; and Dr. Arthur D. Woods of State Center, delegate. Walter C. Alvarez, M.D., of the Mayo Clinic, Rochester, Minnesota, was the speaker of the evening, reading a paper on Neurosis in Organic Disease.

Mitchell County

At a meeting of the Mitchell County Medical Society, Tuesday, December 2, the following officers were elected for 1942: Dr. Joseph C. Westenberger of St. Ansgar, president; Dr. William R. Owen of Osage, vice president; Dr. Merrill O. Eiel of Osage, secretary and treasurer; Dr. Thomas S. Walker of Riceville, delegate; and Dr. Theodore E. Blong of Stacyville, alternate delegate.

M. O. Eiel, M.D., Secretary.

Sac County

The Sac County Medical Society met at the Park Hotel in Sac City, Thursday, November 20. An interesting lecture, illustrated with lantern slides, was presented by Louis E. Moon, M.D., proctologist of Omaha, Nebraska.

The December meeting of the Sac County Medical Society was held at the Park Hotel in Sac City, Thursday, December 18, with Wilbur C. Thatcher, M.D., of Fort Dodge, as guest speaker. Dr. Thatcher discussed the Toxemias of Pregnancy.

W. I. Evans, M.D., Secretary.

Wapello County

Dr. Edward B. Hoeven was elected president of the Wapello County Medical Society at the annual meeting held in Ottumwa, Tuesday, December 16. Other officers are: Dr. Robert O. Hughes, vice president; Dr. L. A. Taylor, secretary and treasurer; Dr. Clyde A. Henry, delegate; and Dr. Harold A. Spilman, alternate delegate. Dr. Henry is of Farson; all other officers are of Ottumwa.

Washington County

The Washington County Medical Society held its regular monthly meeting Tuesday, November 25. Following a six-thirty dinner the business session was held. The speaker of the evening was Daniel J. Glomset, M.D., of Des Moines, who discussed Heart Disease. There was a good attendance and the program was enjoyed by all present.

The annual meeting of the group was held Tuesday, December 16. Results of the election are: Dr. Truman M. Mast of Washington, president; Dr. Frank M. Mahin of Ainsworth, vice president; Dr. William S. Kyle of Washington, secretary and treasurer; Dr. William L. Aleorn of Washington, delegate; and Dr. Eli E. Stutsman, alternate delegate.

Winneshiek County

The annual meeting of the Winneshiek County Medical Society was held at the Hotel Winneshiek in Decorah, Wednesday, December 10. Results of the election are: Dr. Leo C. Kuhn of Decorah, president; Dr. John G. Goggin of Ossian, vice president; and Dr. Ralph M. Dahlquist of Decorah, secretary and treasurer.

Iowa Academy of Ophthalmology and Otolaryngology

The annual meeting of the Iowa Academy of Ophthalmology and Otolaryngology was held in Iowa City, Friday, December 5, at the University Hospitals. Guest speaker for the all day session was Harris P. Mosher, M.D., professor emeritus of otology and laryngology, Harvard Medical School, Boston, and president of the Board of Otolaryngology.

Dr. Stephen A. O'Brien of Mason City was named president elect at the annual election; and Dr. Thomas R. Gittins of Sioux City assumed the presidency for 1942. Dr. Carl A. Noé of Cedar Rapids was elected secretary and treasurer of the organization. The executive council includes Dr. Harold J. McCoy of Des Moines, chairman; Dr. Sydner D. Maiden of Council Bluffs; Dr. Gordon F. Harkness of Davenport; Dr. Orval L. Thorburn of Ames; and Dr. Joseph E. Dvorak of Sioux City.

Iowa Urological Society

Twenty urologists from Iowa, South Dakota and Minnesota attended the annual meeting of the Iowa Urological Society held in Sioux City, Saturday, December 6. The morning program consisted of demonstrations at St. Joseph's Hospital by Drs. Wayland K. Hicks, Edward M. Honke, Lawrence E. Pierson and Allen C. Starry, all of Sioux City. After luncheon the group adjourned to the Martin Hotel for a business session and discussion. Speakers were Drs. Robert J. Nelson of Clinton, Iowa; Robert B. McIver of Jacksonville, Florida; and Hugh J. Jewett of Baltimore, Maryland.

Sioux Valley Medical Association

The Forty-seventh Annual Session of the Sioux Valley Medical Association was held at the Martin Hotel in Sioux City, December 3 and 4. The program on Wednesday was as follows: Surgery of the Biliary Tract, John R. Paine, M.D., Minneapolis; Common Urologic Lesions Observed by the General Practitioner, Gilbert J. Thomas, M.D., associate professor of urology, University of Minnesota Medical School; Clinics on Leukemias and Blood Dyscrasias, Charles H. Watkins, M.D., of the Mayo Clinic, Rochester, Minnesota; Clinic on Surgery, Dr. Paine; The Examining Physician and the Life Insurance Company, Ralph T. Gilchrist, M.D., Milwaukee, assistant medical director of the Northwestern Mutual Life Insurance Company; and Diagnosis and Treatment of Anemias, Dr. Watkins.

The Thursday program was as follows: Pediatric Clinic, Roger L. J. Kennedy, M.D., University of North Dakota, School of Medicine, Grand Forks, North Dakota; The General Practitioner, a Teacher of Better Obstetrics, Dr. Kennedy; Diagnosis and Treatment of the Common Diseases of the Skin, Ruben Nomland, M.D., professor of dermatology and syphilology, State University of Iowa, College of Medicine, Iowa City; Convulsive Seizures in Infants and Children, Dr. Kennedy; Dermatologic Clinic, Dr. Nomland; and Nervous Indigestion, Walter C. Alvarez, M.D., of the Mayo Clinic, Rochester, Minnesota.

PERSONAL MENTION

Dr. Stuart H. Cook, formerly of Randolph, Nebraska, has arrived in Rock Rapids, to enter the practice of medicine. Dr. Cook was graduated in 1927 from the University of Nebraska, College of Medicine, Omaha, and has been practicing in Randolph since that time.

Dr. Harold C. Bone of Des Moines was the speaker of the evening when the Jefferson Rotary Club met Tuesday, November 25, in Jefferson. Dr. Bone spoke on "Life Lines versus Waist Lines."

Dr. Walter R. Fieseler of Los Angeles, California, has arrived in Fort Dodge to take over the practice of Dr. Homer W. Scott, who is retiring from active practice. Dr. Fieseler was graduated in 1920 from the State University of Iowa, College of Medicine, Iowa City, and for five years was a member of the hospital staff as assistant to Dr. Nathaniel G. Alcock in the department of urology. Since 1930 he has practiced in Los Angeles, where he was also associate professor of surgery in urology at the University of Southern California.

Dr. Francis E. Giles, formerly of Hibbing, Minnesota, has come to Cresco where he will occupy the offices of Dr. George Plummer who is retiring from active practice. Dr. Giles was graduated in 1938 from the University of Minnesota Medical School, and has taken postgraduate work in the Chicago Maternity Center.

Dr. Herbert Pease, formerly of Monticello, has taken over the office and practice of Dr. Edwin C. O'Connor, who is now located in New Hampton. Dr. Pease had practiced for eighteen years at Slater and for seventeen years at Blairsburg, before going to Monticello two years ago.

Dr. Leonard P. Ristine, superintendent of the state hospital in Mt. Pleasant, furnished the program for the Scott County Cooperative Club at a meeting held in Davenport, Tuesday, November 18, with an address on "Commitment, Retention and Discharge of Psychopathic Patients".

Dr. Wallace S. Petty, former head of the Sioux City Health Department, who has been taking a special course in public health at the University of Minnesota, will join the Nebraska State Health Department for a period of one year beginning January 1, 1942.

Dr. Forrest J. Austin of Fort Dodge, director of the public health unit in that district, was guest speaker for the Madrid Lions Club, Tuesday, November 18. He spoke on "Health Problems After 40".

Dr. John L. Klein, Jr., of Muscatine, spoke on "Common Emergencies" for the closing meeting of the Volunteers in the Muscatine Emergency Aid and Rescue Unit.

Dr. Celia A. McNeely, formerly of Corinth, New York, has arrived in Glenwood, where she has accepted an appointment as physician in charge of the girls' division of the state school at Glenwood.

Dr. Ernest E. Shaw of Indianola was guest speaker at the regular luncheon of the Leon Rotary Club, Monday, November 17. He spoke on "Diet and Health".

Dr. Joseph H. Trimbo, who has practiced many years in Winfield, has moved to Chelsea, where he will occupy the offices of the late Dr. Dun Van.

Dr. James E. Dyson of Des Moines addressed the Jasper County Farm Bureau home project groups, Friday, December 5, at the Hotel Maytag in Newton, speaking on "Nutrition".

Dr. Eleanor Hutchinson, who was formerly engaged in private practice in Belle Plaine, has been appointed physician and head nurse in the Juvenile Home at Toledo.

Dr. Walter R. Brock of Sheldon spoke before the Paullina Lions Club, Monday, November 17. The subject of his talk was "Life Lines versus Waist Lines".

Dr. William S. Katzenstein has entered the practice of medicine at Minden. He was graduated in 1938 from Creighton University School of Medicine, Omaha.

Dr. Leslie L. Carr of West Union spoke on "Heart Disease and How It Affects the Business Man," for members of the Waukon Kiwanis Club, Monday, November 24.

Dr. J. Stuart McQuiston of Cedar Rapids was guest speaker for the regular meeting of the Marion Lions Club, Tuesday, November 25, discussing "Heart Disease in the Business Man".

DEATH NOTICES

Cronk, Clara L. Kembel, of Bloomfield, aged seventy-nine, died suddenly December 19 after a heart attack. She was graduated in 1892 from the Keokuk Medical College, and at the time of her death was a Life Member of the Davis County and Iowa State Medical Societies.

Forsyth, Manley, of Fremont, aged sixty-two, died December 16 of a cerebral hemorrhage. He was graduated in 1908 from the Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Mahaska County Medical Society.

Green, Hiram Otto, of Spencer, aged seventy-one, died December 14 after an extended illness. He was graduated in 1895 from the St. Louis College of Physicians and Surgeons, and had long been a member of the Clay County Medical Society.

Stone, James Gilmer, of Bloomfield, aged fifty-eight, died December 15, of a cerebral hemorrhage. He was graduated in 1908 from the Hahnemann Medical College and Hospital, Chicago, and at the time of his death was a member of the Davis County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. TOM B. THROCKMORTON, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

DR. WALTER L. BIERRING, Des Moines

DR. R. T. LENAGHAN, Clinton

DR. HENRY G. LANGWORTHY, Dubuque

Medical History of Calhoun County

PAUL W. VAN METRE, M.D.,

Rockwell City, Iowa

Calhoun County, first called Fox County, was organized in August, 1855, when its population was less than one hundred. At its first election held that year nine men voted to fill seven offices. There was only one railroad, the Illinois Central, from Dubuque to Sioux City, until 1875. In comparison with all the immediately adjoining counties, the early development of flat Calhoun was retarded by the fact that the northern portion of the county was annually submerged in water most of the growing season. In the early 1880's, with the use of drain tile and the construction of enormous drainage ditches, large ponds and impassable sloughs were converted into highly productive land, after which the population rapidly increased and the development of resources in Calhoun County kept pace with those in neighboring counties. Today its 400,000 acres are nearly 100 per cent tillable and the lands that within this generation were used for grazing the cattle of neighboring counties, are devoted to raising splendid crops of grain. As is usually true, the woods and streams attracted early settlers toward the river near Lake City until the advent of the Illinois Central Railway in the northern part drew them toward Manson and Pomeroy in that section. The central portion with the present county seat was last to develop.

Tradition says the first resident physician in Calhoun County was Dr. St. John who was located in Lake City in 1857, but remained only a short time. He was followed by Dr. J. W. Hallenbeck, who also remained only a few years and was succeeded by Dr. E. V. Blachley who practiced there for seven or eight years. None of these physicians is registered in the Court House. The first one of record is Dr. F. C. Stewart who came in 1871. He had been a Union soldier in the Civil War after which he was graduated from the College of Physicians and Surgeons at Keo-

kuk. He was a man of high intelligence, a very successful physician and surgeon, continuing in practice with great demand for his professional skill until the time of his death.

The next physician was probably Dr. Henry Young who located at Manson in 1872. Dr. Young exemplified the best ideals of a man and a physician and was highly esteemed as both. He was the Illinois Central Railway physician, U. S. pension examiner, member of the Twenty-fourth and Twenty-fifth General Assemblies of Iowa, member of the 1893 World's Fair Commission, State Senator in the Thirtieth, Thirty-first and Thirty-second General Assemblies, and president of the State Drainage Association. With all this he found time to practice medicine as well as to participate actively in the civic affairs of his community—even to teaching a Sunday school class of young men for years.

Contemporary with these was Dr. Josiah D. McVay who located at Lake City in 1872. Serving in the Civil War, he had been a prisoner of war for nine months at Camp Ford Tyler in Texas. Dr. McVay was also honored with election to the State Senate in 1888, having first served in the lower branch of the legislature as a representative from this district. He was also the first president of the County Medical Society, organized in 1888. Dr. Stewart, in the service of his country, suffered a severed finger in a battle on a gun boat. During the epidemic of the black small-pox in the Lake City vicinity in 1882, the disease was so fatal that it was almost impossible to hire an undertaker to care for the bodies. Sometimes the physician had to care for patients after, as well as before death, placing the remains in a pine box and even assisting in the burial. Both Drs. Stewart and McVay, as so often the case of these resourceful, pioneer physicians, were skilled in surgery and their services were in demand

scores of miles away from Lake City. Light on the humanitarian instincts of a pioneer physician is shown by an instance told the writer by a pioneer whose brother had suffered a shoulder dislocation. Dr. McVay when called, said, "Now I want to show you how to put this shoulder back in place for this is likely to happen again and again and you can't be calling me every time." As an instance of early medico-public health problems, another of these pioneers still alive tells that in the Lake City smallpox epidemic in the practice of Dr. Barker, the father, mother and three children of one family died, only one child remaining alive. Those who cared for the family in the poor home, walked out on the prairie, took a bath and discarded their infested clothes, leaving the house locked up where it remained untouched for a year. The bodies were buried in a lot rented for twelve years and fenced off, so that the farmer plowed around the iron railing. Now, fifty-eight years later, the sacred rights of the dead are observed by the present owner.

Another successful early practitioner was Dr. D. W. Wight of Pomeroy who located there in 1875, practiced until 1894 and then returned to his former home in New York. Besides being prominent in the pioneer life, a charter member of the Masonic lodge, etc., he was a "mighty hunter" as befitted one living in the swampy prairie, where the migration of wild game, from their very abundance, actually clouded the skies.

Contemporary with all these was Dr. M. J. Land of Farnhamville, whose daughter was married to Dr. S. J. Farlow, uncle of the present Dr. Farlow of Farnhamville.

Dr. Duncan Reid located at Manson in 1878, remaining ten years and going as a missionary to Africa. Another early physician was Dr. W. T. Speaker of Manson whose dates are 1887 and 1918, a man of high ideals who performed difficult surgical operations such as limb amputations, with skill. A severe epidemic of diphtheria raged in his practice requiring nursing as well as doctoring and it was not unusual for the physician to remain on the case performing this act of mercy and watching the terrific ordeal of strangulation, helplessly! Dr. Hugh Mullarky, widely known and esteemed, although "a diamond in the rough", practiced at Manson from 1888 until 1920. He served in the army during the World War and later had charge of an Indian Reservation Hospital in Wyoming.

Among the early physicians of Calhoun were Drs. D. J. Townsend and J. W. Craig of Lohrville, locating there in the same year, 1886, and each continuing in practice there more than fifty years. Their influence on the medical history of

the community was remarkable, down to the time of retirement, and always for the best. An instance of their fearless fight for high ethical standards was revealed in a note sent to a practitioner who reputedly performed an illegal operation on one of their townswomen. The note read: "Send her back that money: Hell's gaping for men like you." They said the money came promptly by bank draft. Both were studious searchers for medical knowledge; both were able practitioners. Dr. Townsend was gifted with a dignified, virile presence which carried him far in civic as well as medical circles. President Bowman of Johns Hopkins said: "A man is not educated who does not work for the betterment of mankind." As a country teacher Dr. Townsend qualified as such and later being a successful physician and surgeon, was elected to the state legislature and held numerous positions of trust as mayor, councilman, school board director, county supervisor and chairman of his party County Central Committee for years.

At this period, the seat of county government was moved to Rockwell City. The first physician here was Dr. D. M. Johnston whose date of registration is 1881. Like many early day physicians, he operated a drug store and *unlike* the majority, he left a record of dispensing more than therapeutic doses of the stuff that cheers but also inebriates. The Souders (man and wife, C. H. L. and Ellen) next registered in the county in 1890 and Dr. Ellen Souder still resides in the county, on their beautiful farm nine miles west, although for a period they lived in Englewood, Illinois. Came next to Rockwell City, Dr. J. M. Cooper, then Dr. R. H. Hews then Dr. L. E. Eslick, then Dr. Alva C. Norton, both of the latter remaining in active practice at this writing. Dr. Hews was a New Yorker, attracted here by the opening up of new, cheap land. His son, Dr. Lewis D. Hews, practiced here from 1902 until partial retirement in California in 1919.

MEDICAL SOCIETIES

The first county society was organized in 1888 at Rockwell City. Original officers were Dr. J. D. McVay, president, Dr. W. W. McMackin, secretary. Charter members were H. H. Baldwin, J. W. Craig, W. W. McMackin, J. D. McVay, D. T. Martin, Duncan Reid, F. C. Stewart, D. J. Townsend, D. W. Wight and Henry Young. Irregular meetings were continued only a year or two when the society ceased to exist.

The present county society was organized at Rockwell City, August 26, 1903, with genial Dr. Churchill of Fort Dodge acting as temporary chairman. Officers chosen were Dr. D. J. Town-

send. Lohrville, president; Dr. R. P. Hoxie, Knierim, vice president; Dr. R. H. Hews, Rockwell City, secretary, and Dr. A. C. Norton, Rockwell City, treasurer.

In 1923, the Twin Lakes District Medical Society, was organized with its permanent meeting place at Rockwell City. It first consisted of the county societies of Calhoun, Carroll, Greene, Pocahontas, Sac and Webster, "affiliated for postgraduate instruction." The first officers were Dr. L. G. Patty, Carroll, president; Dr. W. H. Bates, Fort Dodge, vice president, and Dr. P. W. Van Metre, Rockwell City, secretary and treasurer. Later seven other contiguous counties were affiliated and annual meetings have since been held with an average of more than one hundred physicians in attendance.

MILITARY SERVICE

The following medical men participated in the armed services:

Pray, Gilbert L.: Spanish-American War, 1898.

Eslick, Louis E., Capt. M. C.: Examining physician, draft until August, 1917, France thirteen months until September, 1919.

Farlow, Charles T., 1st Lieut. M. C.: A. E. F., January, 1919.

Herrick, Thomas B., Capt.: British Army Medical Corps.

Hinrichs, Robert G.: June, 1917, to May, 1919.

Hoit, Jefferson N., Capt. M. C.: July, 1917, to May, 1919.

McVay, Melvin J.: July, 1918, to December, 1918.

O'Connell, John, 1st Lieut. M. C.: In county short time, returned to St. Louis.

Mullarky, Hugh, Major, M. C.: February, 1917, to March, 1919. Remained in government service.

Craig, John W.: Examining physician, County Draft Board, August, 1917.

Norton, Alva C.: Assistant examining physician, County Draft Board, 1917.

Townsend, Daniel J.: County Four Minute Man, connection Liberty Loan.

HOSPITALS

No regular hospital was organized in the county until Dr. D. W. McCrary opened one in an old hotel building at Lake City in 1917. (Private residences were at times and are today, run as hospitals in Rockwell City, with and without trained nurses.) Dr. M. J. McVay built the McVay Memorial Hospital in 1930 and in 1937 Dr. L. L. Davidson bought and fitted a residence as the Davidson Hospital, both in Lake City. In

1939, Dr. W. W. Stevenson converted a large residence into the Rockwell City Hospital.

DISASTERS AND EPIDEMICS

The smallpox epidemic of the eighties in and near Lake City was serious but no record of the number of deaths is to be found.

In the Pomeroy cyclone of 1893, forty-two persons were killed. The Pomeroy, Jolley and Manson physicians did valiant service to the stricken people. Manson physicians were brought there by an Illinois Central Railway official's special train which had been flagged by a man en route to Manson for help. The few buildings left standing in the town were used as temporary hospitals to care for the injured as they were removed from the debris.

In the year 1905 a severe typhoid epidemic arose from infected food served at a church dinner in Rockwell City. There were about sixty cases with approximately fifteen deaths. An investigator from the State Health Department could not definitely locate the origin, but it was thought to be through a carrier.

DIRECTORY

Farnhamville

Land, M. J., 1887.

Farlow, S. J., 1893, Strong personality, good physician.

Green, William T., 1903.

*Farlow, C. T., 1910.

Jolley

Thompson, John R., 1882.

Lawson, Thomas J., 1896.

Carney, Andrew E., 1898.

Kepler, Cornelius C., 1913.

Carstensen, A. B., 1916. Now in Linn Grove.

Adair, John H., 1930.

Knierim

Hoxey, Robert P., 1901.

Morgan, Charles H., 1901.

Shaw, Robert H., 1901

McNeil, Benjamin, 1902.

Lake City

St. John, 1857. Tradition says first doctor in county.

Hallenbeck, J. W. Tradition says "early practitioner here."

Blachley, E. V. Here seven to eight years.

Twining, Edward T., 1867.

Mackey, J. L., 1887.

Stewart, F. C., 1871. First recorded physician in county, outstanding.

Barker, I. N., 1873.

McCannon, F. W., 1863.

Cavett, R. W. Jumped out of window.

Streuter, Bert F., 1887.

Burt, C. I., 1888.

*Still practicing in this locality.

- Gannaway, C. R., 1901.
 Chatterton, W., 1894.
 McCord, J. B., 1884. Missionary to China.
 McCrary, Delbert E., 1893. Bought out Chatterton in 1900; opened first hospital.
 Humprey, H. M., 1895. Partner of Kauffman.
 Kauffman, Frank E., 1897. Went to Florida, died about 1939.
 Hull, John F., 1897.
 Bywater, W. L., 1897. Now in Iowa City.
 Pray, Gilbert L., 1897. Spanish-American War in Philippines.
 Baldwin, J. R., 1898.
 Jones, Elmer A., 1898.
 Botsford, Richard, 1898.
 Valenta, Joseph A., 1917.
 *McCravy, Warren E., 1917.
 *McVay, Melvin J. Built own hospital in 1932.
 Longley, Earl G. Now specialist in Minneapolis.
 Middleton, Harry E., 1917. Now in Alton, Illinois.
 Field, H. B., 1919. Now in Chicago.
 Merriam, S. A., 1921.
 Scains, W. H., 1928.
 Wiggins, Carol. Very short time resident.
 Lindblom, Alton, 1937.
 Carlson, L. A. Was assistant at Davidson Hospital.
 *Davidson, L. L. Came as associate to Dr. McCrary, now has own hospital.
 *Hobart, F. W., 1929. Came as associate to Dr. McVay.
 *Peek, L. H. Came as associate to Dr. McCrary.
- Lohrville
- | | | |
|-----------------------|--|--|
| Townsend, D. J., 1886 | \| | Colleagues, locating same year, remained here over |
| Craig, John W., 1886 |  |  | 50 years. Both outstanding. |
- Townsend, George, 1887.
 Tigner, W. M., 1887.
 Shafer, A. S., 1889.
 Green, W. T., 1903.
 Hibbs, F. V., 1902. Now at Carroll, Iowa.
 *Isenberg, B. A., 1920.
 *Weyer, J. J., 1937.
- Manson
- Young, Henry, 1872-1927. Active in politics.
 Reid, Duncan, 1878-1888. Went to Africa.
 Benton, Rosa, 1883-1896.
 Speaker, W. T., 1887-1918.
 Mullarky, Hugh, 1888-1920. Outstanding, retired after years of government service.
 Ferrel, A. M., 1893-1894.
 Martin, D. T., 1892-1896. Removed to Pomeroy, died there.
 Briggs, D. D., 1894-1897.
 Wilson, E. W., 1896.
 *Freeburger, Sarah M., 1897.
 Blackstone, B. P., 1899-1900.
 Herrick, T. B., 1914. Brilliant, died in 1938.
 Nelson, Albert B., 1897-1900.

*Still practicing in this locality.

- *Prettyman, O. R., 1918.
 *Hinrichs, R. G., 1920. U. S. A. 1918-1919.
 Hansman, George H., 1921. Native of Manson, pathologist, never practiced.
 *Faust, John H., 1939.
- Pomeroy
- Carroll, J. M., 1879. Said to have located in 1875.
 Wight, Daniel W., 1878. Registered about 1880, easterner.
 Martin, D. T., 1886. Died in 1919, ardent Mason, churchman and landowner.
 Fischer, Hermann, 1887.
 Wright, O. R., 1893. Bought out Wight, went to Dakota.
 Arent, Asaph, 1898. Went to Humboldt, Iowa.
 Jordan, C. H.
 *Taylor, C. I., 1902. Bought out Wright.
 *Weber, W. W., 1912.
 O'Connell, John, 1920. Returned to St. Louis after one year.
 Van Voorhies. Said to be first doctor here.
- Rockwell City
- Johnston, D. M., 1881.
 Miller, J. E., 1881.
 Souder, C. H. L., 1881.
 Souder, Ellen A., 1882. Octogenarian, retired to farm.
 Mendenhall, A. L., 1884.
 Hews, R. H., 1888.
 *Eslick, L. E., 1894.
 *Norton, A. C., 1895.
 Nolan, E. C., 1895.
 Cooper, J. M., 1896.
 Palmer, G. B., 1899.
 Hews, Lewis D., 1901. Extensive landowner.
 Benton, Rosy L., 1905.
 *Van Metre, P. W., 1919.
 Beach, Lena A., 1915. First Superintendent of Women's Reformatory, retired, in California.
 Hutchinson, Eleanor, 1923. Succeeded Dr. Beach, now in Belle Plaine, Iowa.
 Harris, Herbert H. Now in Battle Creek, Iowa.
 *Stevenson, W. W., 1929.
 *Grinley, A. V., 1939.
 *Carver, D. C., 1939.
- Somers
- Little, 1900.
 Townsend, George, 1905.
 Smouse, William Oscar, 1901. Now in Des Moines, Iowa.
 Waterous, 1910.
 Wells, Seth H., 1904.
 Lewis, L. R., 1916.
 Van Camp, Thomas H., 1917. Now in Breda, Iowa.
 *Kennedy, William Clarence, 1912.
- Yetter
- Keeney, William R., 1886.
 Beede, James A., 1889.
 Hopkins, David H., 1886. Now in Glidden, Iowa.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

INFANTILE PARALYSIS—A Symposium Delivered at Vanderbilt University in April, 1941. Published by the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York. Price, \$1.25.

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD—By William E. Ladd, M.D., professor of child surgery; and Robert E. Gross, M.D., associate in surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

ORBITAL TUMORS—By Walter E. Dandy, M.D., adjunct professor, neurological surgery, Johns Hopkins University, Oskar Piest, New York, 1941. Price, \$5.00.

IMMUNITY AGAINST ANIMAL PARASITES By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University, Columbia University Press, New York, 1941. Price, \$3.50.

THE MODERN TREATMENT OF SYPHILIS—By Joseph Earle Moore, M.D., associate professor of medicine, The Johns Hopkins University. Charles C. Thomas, Publishers, Springfield, Illinois, 1941. Price, \$7.00.

THE TREATMENT OF INFANTILE PARALYSIS IN THE ACUTE STAGE—By Elizabeth Kenny. Bruce Publishing Company, Minneapolis, 1941. Price, \$3.50.

INFANT NUTRITION—By Williams McKim Marriott, M.D., late professor of pediatrics, Washington University School of Medicine. Revised by P. C. Jeans, M.D., professor of pediatrics, State University of Iowa, College of Medicine. Third edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

RHEUMATIC FEVER IN NEW HAVEN—Edited by John R. Paul, M.D., professor of preventive medicine, Yale University School of Medicine. Science Press Printing Company, Lancaster, Pennsylvania, 1941. Distributed by the Milbank Memorial Fund, 40 Wall Street, New York. Price, \$1.00.

THE COMPLETE WEIGHT REDUCER—By C. J. Gerling, Harvest House, 70 Fifth Avenue, New York, 1941. Price, \$3.00.

THE MARCH OF MEDICINE—New York Academy of Medicine Lectures to the Laity, 1940. Columbia University Press, New York, 1941. Price, \$2.00.

SYNOPSIS OF MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY—By Forrest R. Davison, M.Sc., Ph.D., assistant professor of pharmacology, School of Medicine, University of Arkansas. The C. V. Mosby Company, St. Louis, 1940. Price, \$5.00.

METHODS OF TREATMENT—By Logan Clendening, M.D., and Edward H. Hashinger, M.D., medical department of the University of Kansas. Seventh edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

ACCIDENTAL INJURIES—By Henry H. Kessler, M.D., attending orthopedic surgeon, Newark City Hospital. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1941. Price, \$10.00.

TEXTBOOK OF PEDIATRICS—By J. P. Crozer Griffith, M.D., emeritus professor of pediatrics, University of Pennsylvania; and A. Graeme Mitchell, M.D., professor of pediatrics, University of Cincinnati. Third edition, revised and reset. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

HEMORRHAGIC DISEASES—By Kaare K. Nygaard, M.D., former fellow in surgery, The Mayo Foundation. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

TECHNIC OF CONTRACEPTION CONTROL—By Robert L. Dickinson, M.D., and W. E. Morris, M.D. The Williams and Wilkins Company, Baltimore, 1941. Price, fifty cents.

CARDIAC CLASSICS—By Fredrick A. Willius, M.D., and Thomas E. Keys, M.D., The Mayo Clinic. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

HANDBOOK OF COMMUNICABLE DISEASES—By Franklin H. Top, M.D., Director, Division of Communicable Diseases and Epidemiology, Herman Kiefer Hospital and Detroit Department of Health. The C. V. Mosby Company, St. Louis, 1941. Price, \$7.50.

BOOK REVIEWS

AMERICA ORGANIZES MEDICINE

By Michael M. Davis. Harper and Brothers, New York, 1941. Price, \$3.00.

This is a good book for one who is interested in the development of plans for some form of medical service to be supplied through compulsory insurance and governmental agencies. The reading may rouse the ire of those who are absolutely opposed to any except the old and accepted methods of providing medical services.

The book is, nevertheless, a good, complete and unusually fair presentation of the case for those who favor it. The author, who has long been one of the chief proponents of some form of "socialized medicine," analyzes the present trends in methods of payment for medical services. In so doing he tries to show that the long-discussed principles of "choice of physician" and "patient-doctor relationships" are catch phrases, with no basis in fact. In drawing his conclusions from the evidence presented in the first two sections of the book, the author concludes that the only solution is some form of compulsory medical insurance, with the chief emphasis placed on the necessity for a large amount of governmental control. Although the volume is a definite argument throughout in favor of certain methods for the provision of and payment for medical services, it is much fairer than most such material published.

The reviewer, and many other readers, will be unable to agree with the conclusion reached by the author, but will probably agree that it is a first-class presentation of one side of the question. It is well worth the reading by anyone interested in the development of this phase of medical service.

E. E. S.

STANDARD BODYPARTS ADJUSTMENT GUIDE

Published by the Insurance Statistical Service of North America, 542 Rush Street, Chicago, Illinois, 1941. Second edition. Price, \$15.00.

This revision of an exceedingly practical book is larger and more comprehensive, yet it is equally concise and as instantly to the point as was the first edition. Each division of the book has been brought up to the minute, and the retention of the ten years' revision service provides a continuity of information upon matters that are subject to legislative and judicial fluctuation. The enlarged chapter on occupational diseases and industrial poisons comprises a surprising span of occupations and pertinent toxic agents which particularly fits the chemical and mechanical expansion of the present age.

Employers, actuaries, claim adjusters and industrial surgeons will find in this new edition increased clarification and ready answers to their diversified problems.

E. J. H.

THE ART AND SCIENCE OF NUTRITION

By Estelle E. Hawley, Ph.D., and Grace Carden, B.S., the University of Rochester, School of Medicine and Dentistry, Rochester, New York. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.50.

Rapid progress has been made in our understanding of food in relation to health and disease. Diet is now a lifesaver in deficiency disease, anemia, diabetes, and in fact takes its place in most conditions of ill health. The doctor must also be "food-minded" in order to take a proper history because of deficiency manifestations.

The physician, as well as the nurse, dietitian or food planner may derive great benefit from a careful study of this book which includes a discussion of metabolism, vitamins and vitamin deficiencies, minerals, adequate diets and a discussion of food in the treatment of various diseases.

E. B. W.

THE NEW INTERNATIONAL CLINICS

Volume III, New Series Four

Edited by George M. Piersol, M.D., professor of medicine, Graduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1941.

This issue of these valuable publications contains the annual review of recent advances in clinical biochemistry by A. Cantarow of Philadelphia. In this review the new contributions to the knowledge of biochemistry and the clinical application of this knowledge are correlated. To those interested in this field this volume is invaluable. The material is presented in a manner similar to the text on clinical biochemistry by the same author.

Included in this volume are nine original articles on a wide variety of clinical subjects—Vitamin C deficiency by Faulkner, the effectiveness and limitations of sulfanilamide in otolaryngology by Persky and Saltzman, and a clinicopathologic study of uremia by Lisa, Solomon and Gordon. Julius Bauer presents a stimulating paper on the problems and practical value of constitutional pathology.

The clinical presentations are by members of the faculty of Washington University Medical School. David P. Barr discusses the pathogenesis of obesity and lipodystrophy. The author discards the classification of endogenous and exogenous obesity. It is concluded that either in lipodystrophy or in obesity there are many phenomena which can be explained only on the basis of local changes in the capacity of the tissues to act as fat depots. Mossie discusses thiocyanate therapy in hypertension. Intractable asthma is thoroughly discussed by Alexander who contends that in most cases it is not allergic in origin. In the treatment of status asthmaticus, paraldehyde in doses of 20 cubic centimeters in 120 cubic centimeters of olive oil per rectum is most effective. Oxygen or helium and oxygen should be given.

Aminophylline is recommended as of distinct value in this type of case. L. W. Dean, Jr., presents two cases of Ménière's syndrome which were attributed to allergy, and by proper therapy completely recovered.

This number corroborates our oft-repeated expression in the evaluation of each volume of the New International Clinics—they are excellent contributions which offer the opportunity to keep abreast of modern medicine.

D. K.

MICROBES WHICH HELP OR DESTROY US

By Paul W. Allen, Ph.D., professor of bacteriology, and D. Frank Holtman, Ph.D., associate professor of bacteriology, University of Tennessee. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.50.

Almost everyone knows that microbes are often the cause of many of our ills, both physical and material. It is a comforting thought, however, that all microbes are not our enemies and that some are friendly, so friendly, in fact, that without them life would be impossible.

The authors have given a word picture, in not too scientific terms, of both of these functions of the small life all about us. It is interesting, entertaining and factual. It is not too academic for the scientist, nor too technical for the layman.

The publishers are to be congratulated on the make-up of this book. The type of paper used to reduce glare in order to make for easier and more comfortable reading is in no little way responsible for the pleasure to be found in reading this book.

R. M. S.

OUT OF THE TEST TUBE

By Harry N. Holmes, Ph.D., professor of chemistry, Oberlin College. Third edition, revised. Emerson Books, 251 West 19th Street, New York, New York, 1941. Price, \$3.00.

When you ride in your automobile, do you wonder how a wheel happened to be invented? Do you ever marvel at the smooth riding afforded by your rubber tires? Did you know that chlorine protects you from danger in your drinking water, yet is an instrument of death in poison gases? Would you like to know more about fuels and how to get the most out of them? What are we using for silk and how did we happen to find a substitute?

If you have a speck of curiosity in your make-up; if you want to know how many of the things around you happened to be; and if you would like a peek into your future home and how the chemistry of raw materials may be a factor in the balance of world power, you simply cannot overlook this book. It's as good as the best mystery story, and it's all true. This book is a "must" on your reading list.

R. M. S.

The JOURNAL of the Iowa State Medical Society

VOL. XXXII

DES MOINES, IOWA, FEBRUARY, 1942

No. 2

SURGICAL TREATMENT OF CARCINOMA OF THE LOWER PORTION OF THE COLON*

CHARLES W. MAYO, M.D., The Mayo Clinic,
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To some it may seem a rather trivial thing to meet and discuss for three days subjects which might appear to be unimportant, as related to the happenings in Europe. However, I was reading just last evening about the losses of the British in Greece, and the report which was given out was that 15,000 were killed or wounded. If the number of soldiers lost at Dunkirk is added to the number killed or wounded in the Greek campaign, the total is actually less than the number of persons who died in the United States and Canada last year from acute appendicitis. Therefore, although the subjects which are to be discussed in the next three days may seem trivial to the uninitiated, fundamentally they are not unimportant because the job of the doctors is a daily one and does not change from year to year.

While some of the subjects which will be covered are not matters of life and death but matters which will make living more comfortable and efficiency greater, there are a great many subjects, such as the one which I have to discuss, which are actually matters of life and death unless they are recognized early and treated properly.

My topic is malignant lesions of the lower part of the colon, the rectum and anus. It is important, in listening to any paper or in reading the literature on any subject, particularly subjects related to medicine and surgery, that the attitude of mind be critical. It should be remembered that in any article or in any paper which may be heard, the opinion of one individual only about that subject is expressed. I realize from articles I have read and conversations which I have had with men interested in the same subjects in which I happen to be interested, that percentages vary in different

parts of the country. There are many similar opinions and many differences of opinion in regard to the method of handling cases. One fact which is important to remember, as far as malignant lesions of the colon are concerned, is that there is no point in the colon where, if the malignant growth is recognized early enough, it cannot be removed and the condition cannot be cured. It always can, if it can be recognized and treated properly, early enough. Another thing to remember in connection with these lesions is that the majority of the therapy is necessarily radical in order to obtain final good results.

Discussion of any subject in which the lower portion of the colon is concerned would be incomplete without at least some remark concerning digital examination. I do not need to say that each patient should have the benefit of digital examination, but I should like to bring out something in connection with digital examination which is, I believe, very important. I do not think that anyone can determine finally from examination from below in many cases whether the lesion is operable or inoperable. Rather by examination from below the cases can be divided into those in which the growth is movable by the finger and those in which it is so-called immobile by the finger.

The growths which on digital examination are little mobile, very little mobile, or fixed, must be considered most carefully. In any case in which a growth of questionable operability is found on digital examination, examination in more than one position should be employed, for example, the knee-chest position, lithotomy position and Sims' position. This is recommended because on examination in one of these positions a growth, which in another position seemed inoperable, may be found movable enough to justify exploration. I have been amazed, as I know others have been, to find on laparotomy that a growth which prior to operation was felt to be inoperable could be moved sufficiently even to permit a one-stage combined abdominoperineal resection. Another rea-

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son for advising examination in various positions in order to evaluate any partially movable lesion is that each patient for whom there is a remote possibility that a resection can be performed, should be prepared preoperatively for such an event. It is not possible, either by proctoscopic or sigmoidoscopic examination, to determine, from the standpoint of fixation, the question of operability.

I have always been confused easily by listening to complicated statistics. I am interested, and I am sure others are, in what happens to one hundred patients who walk in the front door with carcinoma in the rectum, anus, rectosigmoid and low sigmoid. How many of them are sent home? How many of them are operated upon and only palliative procedures done? How many of them are operated upon with the idea of resection and curing them? From The Mayo Clinic, the figures are as follows: Out of one hundred patients, nine who have carcinoma of the right portion of the colon do not receive any treatment. That is, nine patients have malignant lesions of the right portion of the colon which are so far advanced at the time they seek treatment that they are sent home with nothing done. Of patients who have carcinoma of the left portion of the colon, that is, of the anus, rectum, rectosigmoid and lower portion of the sigmoid, fifteen out of the one hundred are sent home without operation because the disease is too far advanced to do anything of benefit to the patient. Few of the patients who have carcinoma of the right portion of the colon are sent home because few patients are in such condition that an end-to-side or side-to-side ileotransverse colostomy cannot be done. As far as palliative procedures are concerned, twenty-four of the one hundred patients with lesions in the right portion of the colon are treated by ileocolostomy only, whereas thirty-two who have lesions in the left part of the colon can have only, say, colostomy and the growth is left in. There is a greater percentage of resectability of the malignant lesions in the right portion of the colon with the idea of curing the patient. Sixty-seven out of one hundred patients who have lesions in the right part of the colon are operated upon and resection is performed, whereas only fifty-three who have lesions in the left part of the colon are operated upon and resection is performed with the idea of cure.

If those figures are broken down and the patients who are sent home without treatment are omitted, the rates of resectability in cases of lesions in the right and left parts of the colon are approximately the same; that is, 74 per cent.

Therefore, it is important in looking over the figures, as they are read in the literature, to think in terms of how many persons were sent home without operation.

When resection for a lesion of the left portion of the colon is undertaken with the idea of curing the patient, several types of operations can be done. Of about 350 cases in which resections for lesions of this type were performed on my own service, and which I reviewed recently, excision of the growth and end-to-end anastomosis were done in seventeen. In anterior resections, part of them were so-called intussuscepting operations, the lesion is removed; a rectal tube placed in the rectum, the upper barrel of the sigmoid is tied to the tube, and the tube is pulled down into the rectum. The intussuscepting type of operation is done either with or without colostomy. In exteriorization operations which are used in some cases the growth is brought out over a Rankin three-bladed clamp and a temporary catheter is placed in the upper barrel of the bowel. Posterior resection was done in only six per cent of the total group of 350 cases.

In the last four years, combined abdominoperineal resection in one stage has been employed in 60 per cent of the cases in which I have done resections for carcinoma of the rectum, rectosigmoid and lower part of sigmoid and left portion of the colon on my service. I have had, up to the present time, 179 cases of one-stage resection as compared to twenty-nine of the two-stage type of combined abdominoperineal resection. In connection with these two-stage resections, it seems to me that if the operations were to be done today, in at least half of the cases I would now perform one-stage resections. I know that there is a place for the two-stage resection, but I believe that in a majority of cases in which combined abdominoperineal resection can be done, the one-stage combined abdominoperineal resection should be used. It is a radical procedure but one which I am sure gives justifiable results and the mortality rate can be kept relatively low.

It is important to consider in detail how one-stage combined abdominoperineal resection is performed, because in one group of cases enough patients can be lost to nullify the value of the resection and in the next group of cases a few details can be changed and the results will be entirely different. To illustrate that, of a total group, I will break down the figures in my cases because, as a surgeon works in a given field, he picks up from this place and that place and by trial and error a lot of different little details which he adapts to his own method.

Out of the 179 patients on whom I have performed combined abdominoperineal resections, fifteen died in the hospital. The mortality rate for the whole group now is about 8.5 per cent. However, if I break the entire group down to, say, the last 144 cases, the mortality rate in these is 5.5 per cent. If I break it down still further, I find that I have been fortunate in the last seventy-four cases and have not lost a patient. I know there is a lot of luck in not losing patients from an operation of this nature. I know that, continuing long enough, things will even up because there is danger in having good luck, and the danger is that you finally begin to think you cannot be licked on your operation, and then you relax on the severity with which you select your cases.

The reason for showing the motion picture (it is one which I completed a month ago) is that I would like to talk about the details of the operation as we go along, because I firmly believe the details of the operation are the answer to your results. (The motion picture titled "A method of one-stage combined abdominoperineal resection" was then shown.)

Nothing will take the place of the proper selection of the patient. Whether a one-stage combined abdominoperineal resection can be performed can be determined only after the abdomen is opened. It cannot be determined preoperatively. Each surgeon uses a different method for selection of patients for any type of operation. I use a method which, to me, is simple because, having worked with a team, I know how fast I can go. I figure that if the condition of the patient is such that I cannot complete a one-stage combined abdominoperineal resection within an hour to an hour and fifteen minutes, I must select another type of operation, and if the growth is low in the sigmoid, I select a two-stage resection. If the growth is low in the rectosigmoid and upper part of the rectum, or in the rectum only, I select colostomy and posterior resection.

I make an incision in the left rectus muscle and retract the rectus muscle to the outside. This type of incision interferes very little with the blood supply or the nerve supply to the rectus muscle. I pick up the posterior sheath and peritoneum a couple of times to make sure that I do not get any bowel in the forceps. Exploration is important because in about five per cent of the cases multiple lesions occur. It is interesting that there is a higher percentage of metastasis to the liver when the lesion is in the left side of the colon than when it is in the right side, and there is a higher percentage of metastasis to the liver

from lesions in the rectosigmoid than from those in either the rectum or the sigmoid itself.

I had two patients for combined abdominoperineal resection the day this motion picture was made. I thought the operation on one of them was going to be easy and on the other one would be hard. Actually, they reversed themselves in the order of difficulty of the operation. The picture is made of the one which was the hardest. This patient had a large, redundant sigmoid, a part of which was removed in order to get it down into the dissected-out rectal space. The superior hemorrhoidal artery was ligated rather high and then the rectum was dissected out. If the proper line of cleavage can be found, it is not a difficult thing to do but I am amazed by the difference in individuals, in the difficulty of doing the blunt dissection with the hand. I use the tip of the coccyx as an index point in trying to dissect out with my hand and, with the scissors I carry the dissection just beyond the tip of the coccyx.

To make the colostomy, I cut both anterior and posterior fascia of the left rectus muscle transversely and then split the rectus muscle with curved forceps. The proper point on the sigmoid is selected for the single barrel colonic stoma and that portion of the colon is brought up through the split in the left rectus muscle. Cutting the anterior and posterior fascia transversely fixes it so that too much strangulation does not occur.

Another detail of importance is closing the incision so that a finger can be admitted easily between the fascia and the wall of the bowel used for the single barrel colonic stoma. I like to bring out plenty of bowel. I do not trim off that extra bowel when the patient is about ready to go home. I leave it all out because I think that nature will adjust the conditions for each individual patient. If the bowel is cut off close to the skin, there is a greater tendency for stricture to occur and thus later a plastic on the colonic stoma may be necessary. I invert the distal stump of the sigmoid the same way that I do a duodenal stump in a resection of the stomach.

The pelvic peritoneum is then sutured beginning at the base of the bladder. It is a little easier, I think, to do these operations in women than in men, first, because usually the pelvic size is larger in a woman; second, the uterus, if still present, can be used as an additional support; and third, resistance to infection is greater.

For the last year I have placed powdered sulfanilamide directly into the abdomen. For the patient shown in the motion picture I put as much as 150 grains (ten grams) intraperitoneally, and the following day the concentration in the blood

was 9.6 milligrams per 100 cubic centimeters. The only thing I can say about the intraperitoneal sulfanilamide is that when we have used it, I have never seen it do any harm.

After closure of the abdominal incision a rectal tube is inserted about one-fourth to one-half inch (0.64 to 1.27 centimeters) into the colonic stoma, and it is tied with fishline into the bowel. The tube should not go below the skin, because if it does it will go below the fascia. If it goes below the fascia and the bowel swells, in the next two or three days there is danger that the resistance from the fascia on the outside and the tube on the inside will cause a cut in the bowel. I lost one of the fifteen patients when the colonic stoma slipped back into the abdomen because I put the tube in and it slipped below the fascia. These little details are important.

I dress the wound with a base of vaseline (petrolatum gauze), then put on the gauze dressings, and fold them up so there will not be any pressure on the colonic stoma. It is surprising, in making rounds, to find how frequently nurses, in changing the dressings, will put a flat dressing directly over the stoma, instead of building it up with a doughnut type of dressing, so that there is no pressure on that stoma. I put a purse-string suture around the anus. I do the posterior resection with the patient in the lithotomy position. I think the Sims position is all right, but I do not like the Kraske position. I think there is too much shock to the patient.

I make a triangular incision, with the base up, and use the tip of the coccyx as the point posteriorly. On none of these patients have I ever removed the coccyx. I do not believe that it is necessary; it certainly is not necessary for the removal of the lesion and it is not, as far as I have been able to judge, necessary for future comfort. The posterior resection, if the upper part of the colon has been dissected out properly, that is, if the dissection is carried beyond the tip of the coccyx, will take no longer than about ten minutes. If there is difficulty from above, it will take longer. It is a big cavity.

I very frequently put in about 75 grains (five grams) of sulfanilamide powder directly into this posterior cavity, then with a pliofilm or rubber composition pack directly on it. If sulfanilamide powder is not used, tincture of merthiolate is used. This pack stays in for four days and is removed very easily on the fourth day. The rubber slips out. In removing this posterior pack care must be taken that it does not come out like a cork and create suction pressure above. With a little stitch there simply to hold it in place, it acts

as a hemostatic and also acts to give support to the pelvic floor in case of postoperative vomiting.

These patients are usually out of bed between the ninth and the eleventh or twelfth days. Eighty per cent of them are out of the hospital in less than three weeks. The posterior wound takes about six weeks to heal in most cases although in some it takes longer. Beginning on the fourth day after operation the posterior wound is irrigated with 0.8 per cent sulfanilamide solution, which is the saturated solution.

In conclusion, as far as the combined abdominoperineal resection is concerned, it can be done with a justifiably low mortality rate. It shortens the time of the malignant lesion in the body, and the economic advantages to the patient are very, very definite. As I say, I lost fifteen patients, and of the fifteen deaths, six were due to infection. I believe that sulfanilamide has done a great thing for these patients in reducing infection. There are just two more points which must be emphasized in the postoperative care. The first is that every patient, regardless of his condition when he leaves the operating room, should have a transfusion of at least 500 cubic centimeters of blood. In addition, they should all be put into high concentrations of oxygen.

TORSION OF THE GALLBLADDER

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The incidence of actual torsion of the gallbladder seems to be sufficiently rare to deserve being reported. Prior to this instance we had never seen a case of torsion of the gallbladder, and none of our many surgeon colleagues with whom we have talked had seen one when this case was presented at our Mercy Hospital staff conference. None of the staff was familiar with such a condition.

The first reported case of torsion of the gallbladder was by Wendel in 1898. Up to 1921 about twenty-four cases had been reported, only four of those by Americans. Up to and including 1939, about 73 cases had been reported, largely by foreign writers. Ninety-four per cent were in women; all patients were over fifty years of age and most of them over seventy years. Gall stones were present in less than one third of the cases.

CASE REPORT

The case we are presenting was one of a white female, seventy-three years of age, mother of thirteen grown children. She was rather slender

in build, had lost fifteen pounds during the past ten years, but had enjoyed reasonably good health. Previous illnesses were almost negligible except that two years before the present illness she had complained of attacks of indigestion and some regurgitation of food. One of the authors (E. D. M.) saw her during one of these attacks and suspected gall stones, but the patient on improvement declined further treatment.

I (E. D. M.) was called to see the patient early in the morning of March 14, 1941. She had been having severe cramps in the epigastrium for three or four hours, the attack coming on suddenly. She was vomiting everything that she swallowed, was in shock with skin surface rather clammy, and groaning continuously with pain. Her temperature was 97 degrees and the pulse rate was 110.

The chest was negative, but there was a loud systolic mitral murmur. The abdomen was rigid in the upper half, more marked on the right side. The patient complained of severe cramps in the epigastrium to the right of the midline, reflexing posteriorly beneath the lower portion of the right scapula. There was a slight icterus noticeable in the corneas.

A tentative diagnosis of an impacted gall stone was made and the patient was given morphine, grains one-half, hypodermically, about one half of the dose injected intravenously and the remainder subcutaneously. The intention was to remove her immediately to the hospital, but upon the relief of her pain she refused to be taken to the hospital. Since reasoning seemed to be of no avail, I considered my services at an end and departed.

Early the following morning an urgent call was received to come to see her; but the family was advised to get an ambulance and take her to the hospital.

She had again been in severe pain with much vomiting for twelve to fifteen hours; she was dehydrated, was in considerable shock and mentally in a near comatose condition. The abdomen was almost board-like with some distention. The temperature was 99.2 degrees and the pulse was 120. There was an auricular fibrillation present with the mitral lesion very pronounced. She was a very sick patient and a very poor surgical risk. The catheterized urine specimen contained 150 milligrams of albumin per 100 cubic centimeters, a few hyaline casts and red blood cells. The blood count showed hemoglobin 60 per cent; red blood cells, 3,730,000; and white blood cells, 14,700. The patient was given 1,000

cubic centimeters of ten per cent glucose intravenously, in addition to sedation with morphine. The symptoms of shock and dehydration improved under supportive treatment although the basic picture was unchanged.

That evening the abdomen was explored through a high right rectus incision. Upon opening the abdomen, we found considerable free amber-colored fluid in the peritoneal cavity. The gallbladder was about the size and shape of a pear, of deep bluish-black color, tightly distended and twisted from right to left on a pedicle composed of a narrow mesentery and the cystic duct. It was held in this position by mild adhesions to the surrounding viscera and was definitely gangrenous. The adhesions were freed by blunt digital dissection and the torsion reduced without



Fig. 1

a great deal of difficulty. There was a slender mesenteric attachment of the lower or proximal one-third of the gallbladder to the under side of the liver. The remaining portion of the gallbladder was covered with a peritoneal covering as shown in Figure 1. The serosa and mesenteric attachment were readily loosened from this lower portion of the gallbladder and dissected downward, cuff like, below the gangrenous area on the cystic duct. The duct then was divided between clamps and the gallbladder was removed. The gallbladder was filled with a bloody, dark colored, thick fluid and also contained a gall stone about the size of a large olive, not impacted in

the duct. (Figures 2 and 3.) The common duct was palpated; it was not distended and no stones could be felt. Due to the gravity of the patient's condition the common duct was not further explored. The ascending colon was distended, without obstruction, simulating an impending ileus, with a general congestive condition of the upper abdominal viscera. After the gallbladder was removed, the abdomen was closed in the usual manner with a Penrose drain inserted to the stump of the cystic duct and brought out through the lower portion of the wound.



Fig. 2



Fig. 3

Her convalescence was rather stormy for five days requiring intensive supportive treatment, including the use of a Wangensteen tube and intravenous and subcutaneous feedings. On the second postoperative day she was delirious, with a temperature of 103.6 degrees, and had urinary and fecal incontinence. After the fifth postoperative day her symptoms began to subside and she progressed to an uneventful convalescence. The

abdominal wound healed promptly and the patient left the hospital at the end of eleven days in excellent condition, and proceeded to make a complete recovery.

The pathologist's report was as follows: "The specimen consists of a gallbladder which measures eleven centimeters in length and up to six centimeters in diameter. The serosa is dark red and smooth. In the lumen there appears a small amount of bile, mixed with blood and a round concrement which measures about 2.5 centimeters in diameter and consists mainly of cholesterol. The wall is thickened and measures up to 0.8 of a centimeter in thickness and seems completely hemorrhagic. The mucous membrane shows a greenish net work. Microscopic—Large areas of the wall are completely necrotic and show a great number of erythrocytes. Diagnosis: 1. Incarcerated gallbladder. 2. Cholelithiasis."

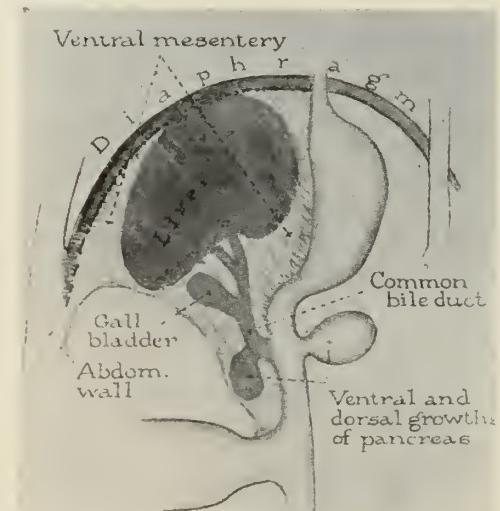


Fig. 4

DISCUSSION

The gallbladder and liver have a separate embryologic development, both coming from the entoderm. The liver arises first as a diverticulum from the primitive gut, two solid buds of cells are next given off, which represent the right and left lobes of the liver and the original diverticulum becomes the common bile duct. From the walls of the diverticulum another outpouching is formed growing forward between the two layers of the ventral mesentery, forming the gallbladder and cystic duct. (See Figure 4.) Thus it is seen that the liver and gallbladder arise as separate diverticula and that both grow within the layers

of the ventral mesentery. In more than 90 per cent of the cases the gallbladder attaches about one-fourth of its surface along most of its length to the under surface of the liver. The remaining three-fourths of the gallbladder surface is covered with a reflection of peritoneum. (See Figure 5.)

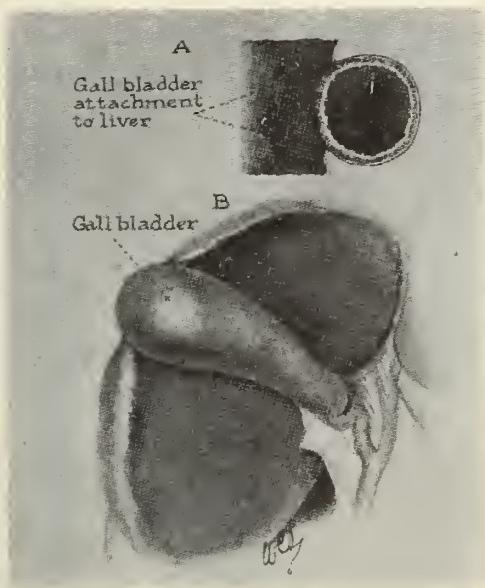


Fig. 5

ANAMOLIES

1. The gallbladder may be completely embedded into the liver.
2. Attachment of the gallbladder to the under surface of the liver by a fibrous, mesentery-like tissue, leaving the gallbladder almost completely covered with a serosa and suspended in almost normal position, as in Figure 6.
3. When the mesenteric folds extend only a small portion of the distance up from the cystic duct, allowing the gallbladder to hang by a frail stem, and allowing it to angulate upon the cystic duct predisposing to partial or possibly complete obstruction and torsion, as shown in Figure 7, the torsion possibly being induced by the peristaltic waves of the transverse colon. This is the type of anomaly found in this case.

We found no instance of a correct diagnosis of torsion of the gallbladder having been made pre-operatively or in cases of non-operative treatment before the autopsy confirmed the diagnosis. One writer has suggested that the symptoms of torsion of the gallbladder form an entity which should

be diagnosed in a certain percentage of such cases, but with the rarity of these cases it is seldom that one observer will see more than one case in his

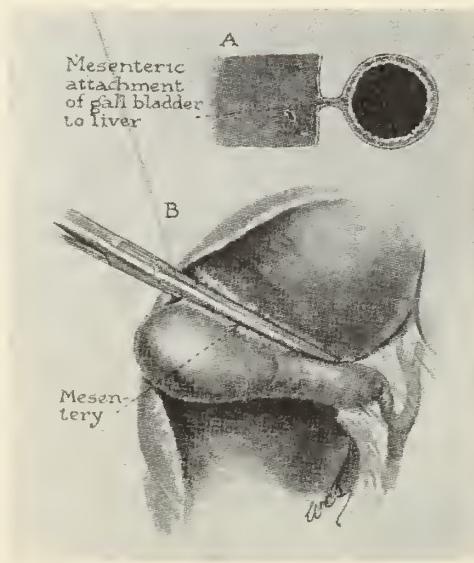


Fig. 6



Fig. 7

practice and we do not feel that the possibilities of recognizing this condition preoperatively are very great.

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Acknowledgment: We wish to thank Doctors Mak-er and Lisenby of Mobile, Alabama, for the standard plates (Figs. 1, 4, 5, 6 and 7) used to show the development and anomalies of the gallbladder, taken from their article on Ptosis and Torsion of the Gall-bladder, published in the Southern Medical Journal in June, 1932.

THE VITAMIN B COMPLEX*

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The work on the Vitamin B complex is one of the most fascinating developments in medicine. Unfortunately, the developments have come so rapidly, and they have been exploited so greatly by people commercially interested in them, that many have come to feel the vitamins are being given undue importance. The known members of the Vitamin B complex are thiamin, riboflavin, nicotinic acid, pyridoxin, pantothenic acid, choline and inositol. These can be chemically identified. There is one other substance, biotin, which should belong here, the chemical structure of which has not been clarified.

From the standpoint of human medicine, thiamin, riboflavin and nicotinic acid are the three of greatest importance. Pyridoxin is still questioned in regard to clinical use. Dr. Spies and his collaborators have seen some effects in patients with a very low pyridoxin excretion in the urine who received pyridoxin. The patients claimed they felt better and some difficulties in walking were corrected. However, the exact place of pyridoxin remains to be clarified. The importance of pantothenic acid, choline and inositol has been shown by animal experimentation. We will have to dispose of them at the present time by saying that their place in clinical medicine is as yet uncertain. It was shown by Wooley that inositol, which is carbohydrate in nature, is required by mice for complete growth and development. We do not know yet whether it is needed by man. A deficiency in choline causes fatty deposits in the liver. If the diet is deficient in choline we find fat accumulation which can be removed from the liver by the addition of choline. We experimented with pantothenic acid in our own laboratory and were able to show that a deficiency in this material causes destruction of the adrenal glands in rats. The adrenal glands become markedly hemorrhagic and in many cases we find that they have become nothing but blood sacs. No one has yet demonstrated any analogous human condition due to pantothenic acid deficiency, and we do not know whether it is of any importance in clinical medicine. Normal human diets may contain enough pantothenic acid. However, it would be remarkable if a substance of such importance to an experimental animal should not also be of some considerable importance to man.

The first one of the three members of the complex, so important in clinical medicine, is thiamin

or what we formerly called Vitamin B₁. Here I would like to express the opinion that we should abandon this alphabetical vitamin terminology with which we have saddled ourselves. There is no chemical relationship whatsoever between the so-called members of this Vitamin B complex. It is a false classification, but we seem unable to rid ourselves of the B₁ and B₂ designations. Thiamin is ordinarily used in the form of the hydrochloride. We know something about the physiologic action of this substance. It is used in the body in the form of a compound called co-carboxylase, which is simply thiamin with an attached molecule of phosphoric acid.

This co-carboxylase is necessary in carbohydrate metabolism at the stage of decarboxylation. Without co-carboxylase we get an accumulation of pyruvic acid, which probably accounts for some of the symptoms, at least, of so-called beriberi. If you have considered beriberi to be a tropical disease, let me warn you that there is probably plenty of beriberi in your own state, although I do not know that to be true by actual observation. We know that it is very common all over the United States. I wonder how many of you think of beriberi when you have a case of edema of the extremities and enlarged heart. In addition to the typical wet beriberi, the condition with which we are more concerned in this country, is peripheral neuritis which is seen more frequently in many clinics than is the typical wet beriberi, and also the milder symptoms of thiamin deficiency which do not give the textbook picture of beriberi.

It should be remembered that because an individual has a diet containing a sufficient amount of thiamin does not mean he cannot develop thiamin deficiency. If there is anything interfering with assimilation, or if there is a condition such as severe diarrhea, vomiting or a gastro-intestinal lesion of any kind, there may be symptoms of thiamin deficiency in spite of the diet containing an adequate amount of thiamin. Thiamin deficiency symptoms also occur, of course, as a complicating factor in some metabolic diseases, such as diabetes, or the peripheral neuritis of pregnancy, and in chronic alcoholism, where it is frequently seen. The estimated adult human requirement of thiamin is about two milligrams a day. That is a figure which represents more or less a consensus of opinion. Some people feel it is perhaps a little too high; 1.8 to 2.0 milligrams a day probably represent the average adult human requirement for maintenance. In the case of thiamin deficiency it is necessary to use considerably larger amounts, if we expect to get rapid results from the treatment. In many cases more rapid effects result

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from parenteral administration than from the use of thiamin by mouth.

Riboflavin is an entirely different substance chemically. We do not know exactly what happens in a deficiency of riboflavin, but we do know the clinical symptoms produced by a deficiency in this substance. There are transverse fissures in the angles of the mouth, a reddened denuded appearance of the lower lip, and a magenta reddening of the tongue. These are the typical mouth lesions of riboflavin deficiency. In addition there is frequently an interstitial keratitis with a considerable growth of blood vessels in the cornea. Some of the patients have severe photophobia and are unable to open their eyes. Frequently there is advanced clouding of the cornea, and the patient may be almost entirely blind, but those opacities usually disappear, unless they are very old ones, upon the administration of riboflavin. We also frequently see macerated seborrheic lesions at the ala nasi, sometimes at the outer and inner canthi, and sometimes around the ears. We have seen one case with a generalized seborrheic dermatitis which became secondarily infected with a streptococcus.

We have also investigated the human requirement for riboflavin in a long balance study of a number of patients. On a deficient diet containing about 350 micrograms of riboflavin, the urinary excretion is usually about 70 or 80, or perhaps 100 to 120 micrograms per day. We found the human requirement to be in the neighborhood of three milligrams a day. In treating riboflavin deficiency we have usually used around ten to fifteen milligrams a day. I have not seen any indication for using larger amounts than that. In using riboflavin it is necessary to protect it from light, especially if it is in solution. Tablets will not deteriorate rapidly, but riboflavin solutions on exposure to light deteriorate rapidly. The substance is destroyed by exposure to a Mazda bulb, or if left on the desk or laboratory bench in a room, exposed to ordinary daylight, it rapidly deteriorates. That is the only serious precaution to take in administering the material.

The third member of the so-called Vitamin B complex, of particular interest to man, is nicotinic acid or nicotinic acid amide. Either one of these is equally effective. The nicotinic acid amide has the added advantage of not producing reactions. Large doses of nicotinic acid cause blushing and a burning sensation in the skin which disappear in thirty to forty-five minutes and do no particular harm. The reaction is no more severe with a gram than it is with 100 milligrams. The nicotinic acid amide does not produce these reactions, but it is about twice as expensive.

We have some little idea of what happens to nicotinic acid in the body. Co-enzyme or factor V is a complex molecule composed of adenine, ribose, phosphoric acid and nicotinic acid amide. This substance is one of the necessary co-enzymes in the breakdown of carbohydrates. However, nicotinic acid amide also exists in the body in other forms, and the relationship between co-enzymes and pellagra is not entirely clear. We used to attribute only typical pellagra to a nicotinic acid deficiency, but we know now that we can have a nicotinic acid deficiency without the skin lesions of pellagra. Sometimes the milder deficiencies are evidenced only by loss of weight, indigestion, mental depression and sore mouth, and these sores in the mouth are indistinguishable from many cases of Vincent's angina. In the dog, nicotinic acid deficiency produces a disease known as black-tongue. This is characterized by a red band-like lesion on the mucosa of the upper lip. Smears taken from the lesions in the mouth show them to be swarming with Vincent's organisms. The same is true of lesions in the mouths of pellagrins.

Sydenstricker and Jolliffe have independently described an acute mental condition which they have called encephalopathy occurring especially in old people, in which there are no mouth lesions and no skin lesions. These patients resemble cases of cerebral arteriosclerosis in which there is mental confusion and disorientation. There may be cog-wheel rigidities and sucking reflexes and a very high mortality rate. These workers found that large doses of nicotinic acid or the amide, intravenously, on the order of a gram or a gram and one-half a day, had a remarkably beneficial effect on these patients.

When deficiencies exist it is the rule rather than the exception to find two or three deficiencies in the same patient. This really is to be expected because these patients do not select laboratory diets. We frequently see patients with pellagra who have nothing but the typical lesions of pellagra, but if these patients are given a Vitamin B complex deficient diet and treated with nicotinic acid, they may develop the symptoms of riboflavin deficiency within a few days and require the administration of riboflavin. Sometimes they will then develop symptoms of thiamin deficiency. However, this fact does not relieve one from the necessity of making a diagnosis. I am not advocating the wholesale administration of Vitamin B complex, without an effort at an accurate diagnosis. The exact diagnosis is essential because the individual needs large amounts of the vitamin for which he is showing deficiency symptoms at that time. If this is supplied in large amounts and he is on a good hospital diet, it is not likely that other symp-

toms will develop. If they do, they should be treated as they appear.

It is most important, of course, to recognize the milder manifestations of these deficiencies, as well as these rather severe ones which I have discussed. Increasing laboratory work indicates that the mild deficiencies are of vital importance. Drs. Williams, Wilder and their associates at the Mayo Clinic have recently reported some work indicating that thiamin deficiency may result in such vague symptoms as undue anxieties, easy fatigue, mental depression and various vague symptoms which might be classified as a neurosis. We have known for years that nicotinic acid deficiency causes not only severe mental depression, but in many cases individuals have to be restrained from committing suicide, and in a few cases, major psychoses actually develop which may or may not be corrected. These instances illustrate the importance of the milder forms of deficiency.

The vitamin business today in the United States is represented by the expenditure of probably \$100,000,000 to \$150,000,000 a year. These figures must have some significance. Either the American public is wasting a lot of money or someone thinks he is receiving some benefit from vitamin preparations. From dietary surveys we feel confident it is no exaggeration to say that at least one-third of the American population is getting a diet which is not adequate in all respects. By adequate I mean it does not come up to the nutritional requirements which modern nutritionists consider to be the optimum standards. We also know from studies by Jolliffe and Cowgill that the American diet has been decreasing in thiamin content. It contains less thiamin today than it did one hundred years ago, largely because of the increased consumption of refined foods, especially white flour, white sugar and highly refined fats, which have had the natural vitamin and mineral content reduced.

The earlier speakers today have mentioned interprofessional cooperation. In this field of nutrition there is an unrivaled opportunity for such cooperation. The problems involved in getting an adequate diet to every member of the American population are so vast it requires the widest degree of cooperation. We feel that something can be done, and much is being done. The modern health officer now realizes that nutrition is a large part of a well-rounded program of preventive medicine. In many states, the state health departments have nutritionists attached to their staff for the purpose of helping the medical profession secure adequate diets for their patients and for the population. I wonder how many of you, in giving

dietary prescriptions, take into consideration the economic status and the food resources of your patient. Is it possible for them to get and continue to get the adequate diet which you feel they must have? It is in this field that the nutritionists can be of considerable assistance to physicians.

There has recently been introduced a product about which you will hear much, and that is the new enriched flour and bread. The enriched white flour and bread will have added to it thiamin, nicotinic acid and iron, and in some instances Vitamin D and calcium. We hope that as soon as supplies become available, riboflavin will also be added to it. The purpose is not to make a drug out of bread and flour. The amount added is not large enough to be of any therapeutic value. The idea is that those who eat an average quantity of bread and flour will obtain approximately one-fourth of the daily requirements of the added vitamins and minerals. It is simply an effort to enable the American population to improve its nutritive status where we feel it is most desirable. It is not meant to cure or treat any disease. However, we feel it will be a valuable move to bring back into white flour some of the nutritive value which has been removed by modern milling processes. We still think the best thing would be for the people to utilize lightly milled flour, but we know most of the American public will not eat lightly milled flour. They do not like the color and they do not like the taste. The next best thing is to conceal the material in a tasteless and colorless form, which will enable us to have angel food cake and still get the vitamins. The only practical answer is to replace our present white flour and white bread with the enriched product.

DIAGNOSIS AND TREATMENT OF INFECTIONS OF THE UPPER URINARY TRACT*

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It is not the purpose of this paper to discuss the etiology of infections of the upper urinary tract; we will confine our remarks to those dealing with diagnosis and treatment.

Neither is it the idea of this writer to present a brief for the urologist. He has never held to the theory that all patients with bladder symptoms should be examined with the cystoscope. In fact more cases of pyelitis of pregnancy and of infancy are cured by the family physician than by the specialist. My purpose in discussing this subject with this group is to bring about a broader understanding between the man in general practice and

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the one who specializes. The physician and the specialist can aid the patient best when they co-operate, knowing the exact condition present in each case and knowing the exact cause responsible.

The physician confronted with a patient having a backache, fever, chills and bladder irritation, many times has a difficult problem in diagnosis. It is well to keep in mind that the symptoms of upper urinary tract infection often are the same as those present in gripe, influenza and the so-called "intestinal flu". The woman with a backache and vague gastro-intestinal symptoms many times is suffering from a hydronephrosis, just as the child with so-called "growing pains" may have a low-grade pyelitis, which is responsible for the leg pains and fever. One does not necessarily need to have a chill or high temperature to have pyelitis. Many people with so-called lumbago have low-grade kidney infections and recover when the infection itself is cleared up. We now realize the patient complaining of bladder trouble may after all have infection in the upper urinary tract. If we stop and realize it, the bladder is only a receptacle which has no excretory or secretory function. Pus in the urine may get in the bladder through the urethra and ureters, since they are the only bladder openings.

Cystitis should be considered as a symptom and not as a disease entity. Bladder irritation may or may not be due to infection in the urine, and we owe it to our patients to examine the urine before we start any form of medication. It is not a lengthy procedure to catheterize a female patient or to have the male patient void a fresh sample of urine when the first office visit is made. The specimen collected by the doctor on his morning house calls, or brought to his office by the patient is of little value except in making a chemical examination. In fact, it is often misleading. The fresh specimen of infected urine gives the most reliable information. It does not take long while the urine is being centrifuged to do the usual chemical tests. A direct methylene blue stain of the smear will many times show the type of bacteria present. These simple procedures only take a few minutes, but they are rich in the dividends they pay.

Many of the ordinary urinary infections clear up without difficulty. The ones which do not respond to the usual therapy within one or two weeks should be given a thorough urologic study.

A few remarks might be made in discussing the relative merits of intravenous and retrograde pyelography. The accuracy of diagnosis from the intravenous pyelogram is in direct ratio to the skill of the man reading the films. Many diag-

noses are read into the intravenous pyelogram which at operation, may prove extremely embarrassing to the surgeon who relied upon them for aid. Experiences have been had in trying to interpret intravenous pyelograms which were so unsatisfactory that a fair opinion could not be given. It is often hard to make the patient understand why his doctor insisted on doing intravenous pyelograms, only to have them ignored by the urologist who, in order to make a diagnosis, must resort to cystoscopy and retrograde pyelography. Intravenous pyelograms, at best, give too limited information for one to place much reliance upon them. Too many errors of diagnosis are made by relying on this type of film alone. Very often it is necessary to submit the patient to a cystoscopy even when the intravenous films are satisfactory, in order to obtain segregated urines for microscopic and culture studies. Retrograde pyelograms after catheterization of the ureters are a very simple procedure.

Infections of the upper urinary tract in children are more commonly found in little girls than in boys. If one accepts the theory that these are more commonly an ascending infection than a blood-borne one, it may be explained on the close proximity of the urethra to the anus, and the ease of transmission of the colon bacillus to the urethra. The stubborn cases of pyelitis in infancy should all have a complete urologic study to determine why they have failed to respond to medical therapy. Fortunately, most of those patients are females, and miniature cystoscopes can be passed on infants as young as six months of age. This is a hospital procedure and should never be attempted in the office. Infants need only be given a short gas anesthesia and the girl of seven or eight years of age rarely requires more than the preliminary administration of sedatives before the cystoscope is used. A number twenty-one cystoscope will readily pass into the urethra of a girl nine or ten years of age. The ureters may then be catheterized and retrograde pyelograms made.

We do not help the patient very much by bladder irrigations if we are attempting to clear up the infection when its origin is from the upper urinary tract. At best, by this procedure, we will only give symptomatic relief. Unless we are absolutely sure the infection is from the lower urinary tract, we are not justified in this so-called form of office treatment.

Patients no longer have the fear of cystoscopy they once had, and with better forms of topical anesthesia, proper preliminary sedation, intravenous and spinal anesthesia, this procedure is not the ordeal it once was. The skilled cystos-

copist can do the same thing with a number eighteen and twenty-one instrument that he can with the number twenty-four and with much less pain and discomfort to his patient. We also know we can get along just as well for the average examination with smaller ureteral catheters than we formerly thought possible.

Many cases of chronic recurring pyelitis of childhood are the result of stasis due to congenital anomalies. Retrograde pyelograms give more information relative to the type of obstruction than do those made by the use of the intravenous pyelographic media. Not infrequently has it been noted that marked improvement has followed catheterization of the ureters. This may be due to the relieving of congestion or edema resulting from the already present infection, or simply to the so-called "ironing out" of the ureteral mucosa. Whatever the cause, many times these patients are rapidly cured after ureteral catheterization.

One of the most annoying complications of pregnancy is the patient with a pyelitis which does not respond to any form of treatment. The usual forms of chemotherapy generally are sufficient and when they are not, the patient's discomfort is usually so great that some other form of management must be resorted to. A great deal of judgment must be exercised in deciding when and when not to catheterize the ureters in such a case. One does not hesitate as much in the early months of pregnancy as he does from the sixth month on, because the danger of precipitating labor is greatest during this period. In the early months of pregnancy, large doses of morphine for the first twenty-four hours after cystoscopy are, as a rule, sufficient to control any uterine contractions which may have started. It is more difficult to control them in the latter part of pregnancy and for this reason, we are much more hesitant in catheterizing the ureters.

At the time of ureteral catheterization, pyelographic studies should always be made. It may be necessary to have the catheter drain the ureter continuously for thirty-six to forty-eight hours. The pelvis should be lavaged with sterile water twice daily and the patient urged to drink large quantities of liquids. Usually it is not necessary to repeat catheterization, but one does not hesitate if the symptoms recur.

The prognosis is good as regards recurrences in future pregnancies, because fortunately only a small percentage have any further difficulty. One gives a more guarded prognosis, however, in the patient who has a recurrence during the post partum period.

Upper urinary tract infections which require urologic study should have a complete cystoscopy.

A careful study of the pyelogram is of the greatest importance in making a diagnosis. When we consider that many of these infections do not require detailed study, what then about those that do?

If we bear in mind that the two main bacteria groups responsible for at least 90 per cent of all urinary infections fall into the cocci or bacilli group, we must consider that focal infection may be the cause of many infections. By studying the pyelogram and the cultures obtained at cystoscopy, we are able to differentiate between a pyelitis and a pyelonephritis. Pyelitis does not show characteristic changes in the pelvis or kidney substance, whereas they are quite characteristic in pyelonephritis. Pyelonephritis is typically a blood-borne infection and since the lesion produced in the kidney substance is a destructive one, the characteristics are readily noted in the minor and major calices. These are only apparent in the retrograde pyelogram.

Almost a decade ago, the ketogenic diet first came into universal use in urinary tract infections due to the gram-negative bacillus. This rather cumbersome therapeutic agent was then followed by mandelic acid which was found to be of equal value and much more easily administered. These therapeutic measures depended on certain concentration of an organic acid in the urine with a hydrogen ion level below 5.5.¹ The effectiveness of mandelic acid therapy depends upon two details which are often ignored; restricting of fluids and adequate dosage. Patients must have frequent readings of the hydrogen ion value to determine whether or not they are receiving sufficient medication properly to acidify the urine, and if not, the dosage should be increased until it is. Usually after about ten days of such management, the urine becomes sterile and the medication should be discontinued. It may be necessary to repeat the course of treatment if the symptoms recur.

If one is able to maintain the proper concentration of the drug and fails to obtain results, it is evident that he is dealing with complicated pathologic conditions, such as stones, foreign bodies and tumors. These, of course, can only be found after thorough urologic study and must be eradicated. Other failures may be caused by faulty kidney function due to considerable cicatricial deformity. In this case, the kidney will be benefited only to the extent to which the drug can be excreted by it. With the advent of sulfanilamide and its derivatives, a valuable agent has been added to our armamentarium. Their effectiveness has been most encouraging, particularly in treating those of the staphylococcus group, which long has been recognized as the most stubborn of all

kidney infections, unless it be those of the proteus group. Within the past few years, valuable studies have been made of the various derivatives of the sulfonamide compounds, which have added several most satisfactory drugs. The most recent is sulfathiazole which has a low degree of toxicity and a high degree of protection against the staphylococcus.

When this drug was first introduced, Lewis² and his co-workers felt that blood level determinations were important enough to be run on all patients receiving this form of treatment. Fortunately, the toxicity of the drug is so low it is now generally conceded this need not be done. The drug must be administered in doses sufficiently high, or the therapeutic effects will not be reached. This drug should also be administered for a week or ten days after all clinical evidences of the disease have disappeared.

Four to five grams of the drug may be given daily over a period of two weeks in most cases without having to be discontinued because of severity of reactions. Pain in the abdomen, nausea, vomiting, headache, anorexia, weakness and nervousness have been the chief complaints. These are indications for decreasing the dosage or discontinuing the drug entirely. Sulfathiazole is best tolerated with food in the stomach or with dilute hydrochloric acid instead of alkalies so often given with sulfanilamide. We have not seen concretions or anuria resulting from the administration of this drug. Whether this is due to our insistence that these patients have a daily fluid intake of at least 4,000 cubic centimeters, or whether it does not occur, we do not know. Whether concretions would be non-opaque to the x-rays, as in sulfapyridine, we are not prepared to state. If anuria does occur, the drug should be withdrawn and the kidney pelvis lavaged with hot sterile distilled water.

CONCLUSIONS

1. All cases of urinary tract infection which do not respond to the usual therapy should have a thorough urologic study.
2. Intravenous urography has not been altogether satisfactory. There is no real contraindication to cystoscopy in children.
3. Usually it is necessary to obtain segregated urines for study, and retrograde pyelograms can then easily be made.
4. Care and judgment must be exercised in catheterizing ureters during pregnancy.
5. The organisms found in most urinary infections are cocci and bacilli.

6. Derivatives of the sulfonamide compounds are the most effective drugs now available for urinary infections.

7. Sulfathiazole has a low degree of toxicity and a high degree of protection against the staphylococcus. There are few contraindications to its use.

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Discussion

Dr. Carl W. Smith, Dubuque: Dr. Benfer is certainly to be congratulated upon so adequately covering the urologic and medical aspects of the diagnosis and treatment of infections in the upper urinary tract in so brief a paper.

It is also commendable that he has emphasized the rôle of the man in general practice in treating a great majority of these cases and the instances in which the cooperation of a urologist should be sought. It has been made clear that any case of refractory or recurrent urinary infection should be thoroughly studied by a competent urologist. There are also, however, several general medical considerations which may have a bearing upon such cases. These are especially avitaminosis, anemia, diabetes, chronic or acute undulant fever, and any other general debilitating condition.

Distant foci of infection probably are important in some cases, due to the hematogenous spread of infection to the urinary tract. Such foci may be the tonsils, teeth, gallbladder, pelvic organs, appendix or the colon, with polyps, diverticuli or simple constipation. It is well known that bacilluria occurs very frequently in healthy individuals. It is to be expected that when any local or general condition exists to lower the resistance of the urinary tract, such bacillurias may result in urinary tract infection. Even in cases with obvious local factors which would tend to predispose to infection by producing stasis or obstruction in the urinary tract, these distant foci of infection may be the immediate source of the organism. This is just another example of the wisdom of treating the whole patient rather than any particular organ or system. It has recently become apparent that diet, particularly the vitamin intake, is of great importance in the development of urinary stones, which are both the cause and the result of urinary infection. Avitaminosis may also result in metaplasia of the urinary tract epithelium, lowering its resistance to infection.

In regard to the chemotherapy of urinary tract infections, it would be wise to emphasize again the need to be on the alert for the appearance of toxic symptoms due to sulfathiazole. Dr. Benfer is to be

congratulated upon the absence of concretions and oliguria in his series. This is undoubtedly due to his insistence upon an adequate fluid intake. In other series hematuria has been a frequent occurrence, and oliguria and anuria have been occasionally reported, with several fatal cases.

While the blood idiosyncrasies, such as anemia and agranulocytosis, seem to be much more rare from sulfathiazole than from sulfanilamide or sulfaipyridine, they probably do occur. At least one fatal case of agranulocytosis has been attributed to sulfathiazole, and leukopenia with granulopenia is a not infrequent occurrence. In short, it still seems to be very desirable whenever possible to follow patients on sulfathiazole with frequent laboratory estimations of the hemoglobin and white count, and urinalyses.

Shortly before the advent of the sulfonamide drugs mandelic acid made its appearance and demonstrated its value in the treatment of all urinary infections, provided that a concentration greater than one-half of one per cent could be maintained in a urine more acid than pH 5.5. Because of the absence of toxicity from mandelic acid it would seem to me that most patients with uncomplicated cases of urinary tract infections and good kidney function, should be first given a trial with mandelic acid, particularly if they are not hospitalized. The recent enteric-coated tablets combining mandelic acid and ammonium chloride greatly facilitate the administration of this drug.

HEADACHE OF OCULAR ORIGIN*

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Headache-cephalalgia is one of the most common of symptoms and the symptom most often treated as a disease. The word cephalalgia, derived from the Greek, means head pain and is self-explanatory. Headache is the symptom most often encountered in an ophthalmologist's office and in our preliminary conversational skirmish with the patient we must, in order to arrive at the correct diagnosis, take into account all of the possibilities of the origin of this symptom. The eyes account for a large percentage of headaches, some authorities say 90 per cent, which may be considerably exaggerated, although the percentage is indeed high. However, even in such a large percentage we may find very few symptoms more unintelligible or more intractable and hence the great numbers of patent medicines, "cures", etc., by quacks and purveyors of analgesic drugs. It is a fertile field for the advertisers.

The mechanism of headache is a controversial subject containing many hypotheses but few facts.

The brain and pia mater are insensitive to pain; however, the sensations in the dura call for a detailed examination and here we find its sensory nerve supply to be small and somewhat unconvincing. The dura of the anterior cranial fossa receives a recurrent twig from the ophthalmic division of the fifth nerve, that in the middle cranial fossa from a twig of the maxillary division accompanying the middle meningeal artery, and also from the nervus spinosus, a branch of the mandibular division. The posterior fossa receives a small twig from the vagus. These nerves are all very minute and require microdissection to prove their presence in the dura. The sensory nerve supply to the dura, except in the region of the base of the brain, has not been definitely demonstrated, although there is a definite sensitivity along the course of the arteries. In disturbances of the visual apparatus it is probable that the reflex pain travels via the fifth nerve and stimulation of the endings of the ophthalmic division of this nerve reflected along its other branches. Hence changes in the eyeball may be felt in the region of the brow by way of the supra-orbital nerve, and pain felt deep in the skull is reflected along the dura branches. According to Michaelson, the mechanism which underlies a ciliary headache is analogous to that which gives rise to referred visceral pain in other parts of the body; that is, a ciliary headache from ciliary dysfunction similar to the pain of angina pectoris from a cardiac dysfunction. He found the degree of pain in a visual reflex depends upon the changing nervous excitability of the nervous system, especially when this system was already hypersensitive from toxic conditions, overwork, lack of sleep and mental worries.

In ocular headache the sympathetic system has an important rôle. A delicate network of sympathetic fibrils controlling vascular tone is found interwoven in the network of vessels in and about the eye. The sensory nerve endings of these vegetative nerves report the changes due to pressure, edema, hemorrhage, inflammation or irritations produced by toxins.

Summing up these statements we may conclude that ocular headache in and about the eye represents local pathology which is often accentuated through the sympathetic system, while it is reported to the area where the headache is felt by way of the fifth nerve and its connections, especially dural connections; vice versa, sympathetic or sensory nerve irritations resulting from conditions within the brain may be referred to or about the eye, producing irritations which may appear local.

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Of the many diseases of the eye which produce headaches, glaucoma is probably the most important since it is the chief cause of blindness in patients past forty years of age. It is often easy to diagnose, and at other times the diagnosis may be a very difficult task. The more difficult type is the non-congestive where the eyeball may show no signs of external changes: headache of varying degrees and duration, and of a transitory nature is present. To elicit an increase of intra-ocular tension may require repeated measurements with the tonometer. Even hospitalization and frequent pressure measurements may be necessary in order to make the diagnosis. In this disease, the visual fields, especially central fields, may prove the deciding factor.

The differential diagnosis of acute iritis and glaucoma may at times be difficult. Since the entire treatment and the after results depend on an early diagnosis, these cases must be very carefully examined. History, tension and slit lamp findings will usually decide the issue. Miotics in glaucoma and mydriatics in iritis is the rule and this should not be reversed or serious consequences will result. One should operate early in glaucoma but not in iritis. Since there are only hypotheses and not facts as to the cause of the elevation of tension in glaucoma, we try desperately to reduce the tension with miotics. If we are not successful we resort to early operation since results of increased tension are well known. Of the two types of operations usually employed in these cases, some prefer iridectomy and others prefer trephining operations such as iridosclerotomy or cyclodialysis.

The purposes of these operations are to form artificial drainage channels for the aqueous, resulting we hope, in the conservation of vision and the alleviation of pain. In acute glaucoma the pain may be very distressing and its cause will not likely be overlooked; however, in chronic glaucoma the pain most often is not so severe although there are certainly exceptions. Parson's textbook does not mention pain in this condition and de Schweinitz says, "In chronic cases there may be only a general feeling of discomfort, a sense of fullness, occasional shoots of neuralgia, or attacks described by the patients as headache, or pain may be entirely absent."

The periodic and severe headaches known as migraine, are not of ocular origin, but are due to the frequency of ocular disturbances and manifestations. They will be discussed briefly. Severe headaches, pain in the eyes, blurring of the vision, scintillating scotoma and other ocular symptoms, bring many patients to the oculist. This

condition is probably of cerebral origin, due to spasm of the cerebral vessels. The treatment is general in character and probably does not belong in this group. However, properly fitted glasses have resulted in apparent cures where the oculist received credit for a cure. The apparent correction of ocular disturbances seems to have prevented an imbalance in the mechanism producing migraine.

We should mention briefly facial neuralgia or trigeminal neuralgia, commonly known as tic douloureux, which is not of ocular origin, but has many eye symptoms. Similarly allergy is often encountered in eye conditions but is generally conceded not to be of ocular origin.

Orbital inflammation will produce severe pain, headache, vomiting, fever and even cerebral symptoms. The causes are injuries, including foreign bodies in the orbit, extension of the inflammation from accessory sinuses, erysipelas, scarlet fever, measles and influenza. Even styes, practically always treated as a minor affliction, may be serious to the extent of producing a meningitis, brain abscess and fatal results. Necrosis of the bones of the orbit will prolong this disease. Syphilis and tuberculosis of the bone must be borne in mind as a cause of this periostitis and orbital cellulitis. In inflammatory conditions we must include inflammations within the eyeball, that is, iritis and scleritis as well as inflammation of the extra-ocular structures of myositis and orbital cellulitis and all inflammations of the nerves leading to the eyes.

"Eyestrain" headache is a complete subject in itself. Sir John Parsons said, "The exact pathology of eyestrain is unknown and the rational visual fatigue in the production of ocular and systemic disorders is largely a matter of conjecture." The demands of modern civilization have increased the number of sufferers from this condition. The majority of these patients go to the ophthalmologist with a self-made diagnosis of eyestrain. They present no serious inflammation or disease of their eyes, but complain of headaches, ocular fatigue, dizziness and even vomiting. This type of patient represents a problem to the ophthalmologist and here differential diagnosis is to be made between organic lesion and ocular dysfunction. There is, of course, generally no one symptom or set of symptoms to guide us accurately.

Asthenopia may be produced by first, refraction errors; second, by muscle imbalance; and third, by aniseikonia. Due to the exactness of the diagnosis in these cases it is certain that the individual examining these cases must have a good knowledge of general medicine. The laxity with which referring doctors send their patients to ordinary

glass fitters and not to those having a medical education should be duly condemned. There is no department of ophthalmic work in which the ophthalmologist must be more deeply versed in general medicine than in this, the search for the cause of asthenopia or eyestrain.

In common with the mechanism of headache, the pain of eyestrain headache may radiate through any of the branches of the trigeminal nerve. The initial cause is painful contraction of the muscle. The muscles concerned may be the ciliary muscle, the extrinsic eye muscles or the occiput frontalis. If anyone doubts that contraction of the ciliary muscles can be painful, one should put strong eserine drops into an eye; the resulting pain will quell any doubts.

Asthenopia, whether accommodative or muscular in association with close work, is the most common cause of ocular headache. In accommodative asthenopia the headache arises from overtaxation of the ciliary muscle and is generally termed ciliary asthenopia. The most simple case of pain from ciliary muscle contraction is found in the hypermetrope with equal errors in both eyes; in an unequal error more pain is usually encountered because more ciliary strain is involved. In astigmatism still more abnormality of the ciliary muscle contraction is encountered. Low degrees of astigmatism often cause more pain than higher degrees of error where there may be no apparent "eyestrain," because the ciliary muscle may make little or no effort to overcome the correction. Low or moderately low degrees of astigmatism cause the ciliary muscle to contract irregularly, more in some fibers than in others at right angles to them, hence producing a lental astigmatism of opposite sense to the corneal astigmatism. The effort may be overdone and the patient will choose a cylinder "against the rule" when the astigmatism is "with the rule". Myopes as a class are not as likely to have headaches of ocular origin as are hypermetropes.

Headaches due to extrinsic muscle imbalance are frequent and may often be relieved by the discriminating use of prisms. Over-correction by prisms must always be avoided and it is better not to use prisms at all than to order them too strong. Furthermore, the same strength of prisms cannot always be used for both distant and near vision. Due to the more complex mechanism performed in the movements of elevation or depression, more pain is often encountered and vertical errors must be corrected by prisms. Maddox suggested the following rules for prisms: two-thirds the maximal correction for esophoria, one-half in exophoria and two-thirds in hyperphoria. Each case must

be considered separately and no fixed rules should be established. A fairly safe rule to follow is to find the weakest prism which will produce binocular vision and consider it the maximum correction and not prescribe any stronger prism. That prescription of prisms for heterophoria is always palliative and not curative is not always the case. Some patients relieved by wearing prisms for heterophoria may be found to have more heterophoria in a year or two of time, but other patients with a similar affliction have been definitely benefited and prisms may be abandoned in a year or two. I believe prisms should be prescribed when indicated and extreme care should be taken not to over-correct the error.

The third etiologic factor in asthenopia, aniseikonia, has had much publicity of late. Aniseikonia may be defined as the difference in the relative size and shape of the ocular images. Headache is the most common symptom. The visual brain impressions may be unequal in size or shape due to optical or anatomic differences, or to a combination of the two. Optical differences may be due to unequal corneal curvatures in corresponding meridians because of the difference in accommodation in two eyes and a difference in the centering of the refractive apparatus of two eyes. In cases due to anatomic causes, the disparity is to be explained by a difference in the arrangement of the receiving retinal units as their corresponding brain neurons pertaining to the two eyes. If this is true the difference in neuron patterns would constitute an anatomic cause for aniseikonia. Most cases of aniseikonia have been found to be due to a combination of optical and anatomic discrepancies between the two eyes or their respective brain centers.

For several years it has been recognized that differences in the sizes of the retinal images, especially in unilateral aphacia and high anisometropia, were noticed in astigmatism; however, about fifteen years ago more scientific attention was paid to these small percentages of eye cases whose headaches and eyestrain persisted after repeated fittings with glasses. Workers at the Dartmouth Eye Institute in Hanover, New Hampshire, have made extensive studies on aniseikonia and the publicity on the subject has increased very much. Time will not permit me to mention the econometer and other apparatus used in testing aniseikonia.

In conclusion, may I say I believe the eyes to be the most common cause of headaches. The ophthalmologist must not belittle or neglect any of his own possibilities for helpfulness in these cases of headaches of ocular origin, and we must

always recognize a variety of possibilities of cooperation with other physicians in any of the departments of medicine.

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Discussion

Dr. Abbott M. Dean, Council Bluffs: To open the argument let me say that headaches of ocular origin are very rare. Aside from the organic causes mentioned by Dr. Stephen, I see comparatively few cases of headache which I can honestly attribute to the eyes. I find that taking this attitude permits me to be more fair to the patient and uncover other causes of headache much more frequently than I otherwise might. People in general have the feeling that eyes are the cause of all headaches, and the ophthalmologist must make himself the clearing house. If I assume from the beginning that the patient is wrong and make him prove that his eyes are responsible I consider that I have a much better chance of unearthing some other cause if it does exist.

Phorias, hyperphorias and exophorias, do cause mild fatigue headaches, gradually increasing as the day progresses, but the relation of the amount of phoria to the age of the patient must be considered in evaluating the importance of a phoria to causing distress. Two diopters of exophoria or one diopter of hyperphoria do not seem to be disturbing to persons under twenty-five years of age; after that age the inclusion of prisms of that amount in lenses seems to add considerable comfort. In passing I would like to say that I see no occasion for undercorrecting a phoria as recommended by Maddox. After the age of forty years correcting even one diopter of exophoria or one-half of a diopter of hyperphoria gives worthwhile added comfort.

I have given up entirely the old paradox that small errors of refraction cause more discomfort than larger ones; I do not believe it. If I assume that small refractive errors do not cause trouble I can invariably find another cause for the discomfort, and I have done a better job for the patient. I disregard spheres less than 1.5 diopters up to thirty years, less than one diopter up to forty years; cylinders less than one diopter up to thirty years and less than .75 of a diopter up to forty years of age. I do not find that such errors cause any discomfort and do not prescribe them without the complete understanding by the patient that he can expect only slightly plainer vision.

The crux of the matter lies here. Worry about eyes causes much discomfort and headache. The office worker has the notion that his work will harm his eyes, he has the notion that he should keep his glasses right up to the mark or some harm will occur, so he becomes conscious of his eyes every year or two and wants them investigated. That is all right, but when he comes, I feel it is much better to reassure him he needs no change, and that he has no worries.

In talking about this problem you hear men say, "Yes, I found his glasses .50 of a diopter off, changed them and cured him of his discomfort; therefore, the error in the glass was the cause of the headache." That is fallacious logic. It is not the change in glass which cures the headache, it is the reassurance that goes with the change. The same effect can be obtained by the reassurance alone. The same holds true with the prescription of new glasses. It is not the 75 sphere that cures headaches in the college girl, it is the feeling of security wrapped up with the glasses. Give them the feeling of security alone; save them the bother of glasses, turn their worries away from their eyes rather than draw their attention to them with a glass. It really does much more good.

For convenience, I classify headaches into six groups; intracranial pathology, eyes, noses, migraine, systemic disease and nervous tension. I have found that if I keep these causes of headache in mind and the more or less characteristic type of pain associated with each, in other words, if I get a careful headache history of the duration, location, time of day and inducing factors, it is comparatively easy to establish the cause of a headache, and it is certainly surprising how rarely the eyes turn out to be responsible.

Dr. Fred F. Agnew, Independence: The subject of headache is one of wide latitude and the differentiation of those of ocular origin from those of other causes where asthenopia is a factor is the all important step in the diagnosis and management of cases so complaining.

Dr. Stephen, in his paper, has given you the mechanism of headache as completely as one could in the allotted time and sufficient for all practical purposes. He has covered the ground of accommodative strain and that due to muscular imbalance. It will be my purpose to discuss some of the other causes not mentioned in his paper.

There can be no question that the chief complaint of patients consulting the oculist is most often headache, self diagnosed as due to eyestrain. While eyestrain is usually the result of an asthenopia, the normal eye, under excessive use, may produce like symptoms. There are so many causes for asthenopia of a more or less general nature that a differential diagnosis becomes the immediate important factor in management and treatment, to be acquired only through very inquisitive history taking. The pa-

tient who has made the rounds of the various "glass fitters" mentioned by Dr. Stephen, finally seeking relief through the oculist, is no new experience with any of us.

Asthenopia is that condition where the accommodative ability has been so reduced by disease, injury or lack of development that it is not able to carry on in a normal manner. The causes are so numerous that each calls for a concentrated effort to determine which of the many it may be.

We have to consider birth injuries, those from instrumentation or contracted pelvis; hemorrhage, either intra-ocular or cerebral; the defective development of syphilis, malnutrition, tuberculosis, the corneal injuries of gonorrhreal ophthalmia, and one of the most important frequently overlooked causes, consanguinity. Behrens states it has been estimated that 29 per cent of albinos of all classes, are the product of consanguinity, and that 27 per cent of all cases of retinitis pigmentosa are of similar origin. In addition we must consider the occupational headaches due to asthenopia, largely brought on by prolonged exposure to light such as welders, cinema operators, and in some places, the handlers of molten metals, glass blowers, snow blindness, the photophthalmia of Parsons, the indurative headache with asthenopic symptoms, the narrow underdeveloped upper nasal space, the high septal deviations, the large cystic turbinates where pain in and about the eyes is a symptom and believed by the patient to be due to eyestrain, that unconquerable asthenopia following encephalitis, bad tooth conditions such as abscesses, dead teeth, and probably the most trying, pulp stones. Each of these conditions is capable of producing asthenopia with the eyestrain headache.

According to de Schweinitz, 70 per cent of eyestrain headaches due to asthenopia have astigmatism as a background, either alone or combined with other refractive errors. He also states that all manner of reflex nerve disturbances may arise because of astigmatism, such as vertigo, pseudochorea, habit spasm, epileptiform convulsions, melancholia, neurasthenia, tachycardia, colic and other forms of dyspepsia. A goodly number of personal experiences parallel this statement. This latter group usually makes rounds of the general physician until some one is alert enough to refer them to the oculist. I believe that physicians, as a rule, are not familiar with the fact that asthenopia is capable of producing such general symptoms; consequently such patients are treated symptomatically with only temporary relief.

This subject of eyestrain headache is so large and has such far-reaching tentacles that I believe it deserves a place on the general section program.

Dr. Henry G. Langworthy, Dubuque: In any discussion of headaches and eye discomfort, it may be well stated that the proper fitting of glasses is a specific in most instances. It ranks first in all human therapy. The ophthalmologist need never apologize for prescribing glasses. In a very few instances glasses may not be needed but these are

the rarer instances. Experience, coupled with thorough special and general examinations, will usually give a clue to puzzling cases. As a matter of fact most general ailments make the prescribing of glasses all the more necessary due to their supporting factors in steadyng the ocular mechanism in any existing refractive, muscular or glare conditions. In all probability the average ophthalmologist prescribes too few rather than too many glasses for his patients. Correcting errors of refraction of one-half diopter, in both sphere and cylinders, usually gives great satisfaction and is not psychologic.

THE VARIATIONS BETWEEN ORAL AND RECTAL TEMPERATURE READINGS*

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Rectal temperature readings are generally believed to be one degree Fahrenheit greater than oral readings made under the same conditions. In order to determine the correctness of this belief, 233 parallel readings of oral and rectal temperatures were made. The subjects were hospitalized patients of boy's and girl's cardiac con-

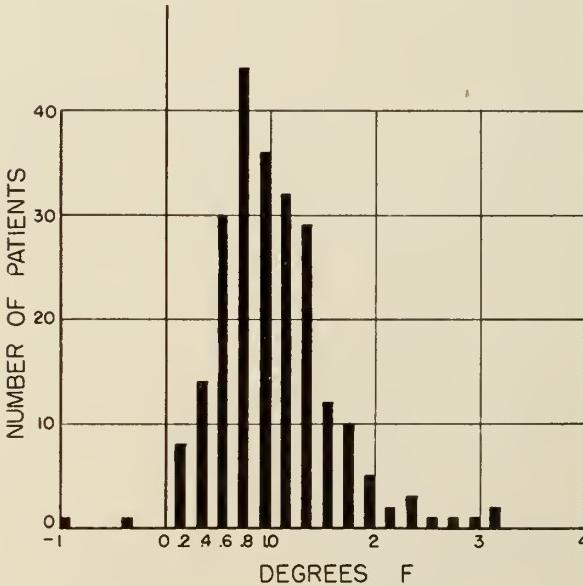


Fig. 1. Variations of rectal from oral temperature readings, using the oral readings as a base line.

valescent wards, and ranged in age from six to sixteen years. The temperatures of the two wards varied from 78 to 84 degrees Fahrenheit; the relative humidity, from 32 to 50 per cent.

*This work was made possible through the cooperation of the following members of the nursing staff: Mrs. E. Kiehne, and Misses K. Hayes, M. Pestotnik, and F. Huff.

The subjects were not allowed food or drink for a period of thirty minutes preceding the temperature determination. Oral and rectal temperatures were determined at the same time. The thermometers used were checked with each other and with a certified thermometer.

The rectal temperature readings differed from the oral readings by amounts varying from -1.0 to +3.2 degrees Fahrenheit. In two instances, the oral readings were higher than the corresponding rectal readings, 99.0 and 98.8 degrees as compared with 98.6 and 97.8 degrees Fahrenheit, respectively. The rectal temperature reading was greater than the oral reading by an average difference of one degree. As shown in the accompanying graph, 171 or 73 per cent of the total number of reading differences fell between 0.6 and 1.4 degrees Fahrenheit. It was observed also that the difference between the rectal and oral temperature readings was not constant for the same subject at different observations.

It is generally agreed that the rectal temperature reading represents more nearly the true internal body temperature than does the oral. It is apparent from these observations that an oral temperature reading cannot be accepted as an accurate indication of internal temperature. Such a finding might be considered relatively unimportant if the oral temperature bore a constant relationship to the internal temperature for each subject; however, no such constant relationship seems to exist. In general, and as a concept of average relationships, a difference of one degree Fahrenheit between oral and rectal temperature readings seems acceptable, but wide individual variations are to be found.

A PEDUNCULATED LIPOMA

J. A. WILLIAM JOHNSON, M.D., Newton

The size, location and form of this tumor should be of sufficient interest to make it worthy of report. Medical literature records several cases of tumors in the region of the upper thigh below the inguinal region. Some have the appearance of malignancy and others are purely benign. Occasionally a tumor recurs in this region after removal. It is interesting to speculate on the part played by gravity in the form finally assumed by many of these tumors in that they become pedunculated.

The patient is a housewife, fifty years of age, first seen June 21, 1939. Complaints were nervousness, fatigue, pounding and rapid heart beat, loss of weight, kidney trouble and tumors.

Present Illness: A tumor began to grow twenty years ago on the upper anteromedian aspect of the left thigh. Fourteen years later it was the size of a grapefruit. Now it has grown to be the size of a head. It hangs by a pedicle somewhat larger than the patient's wrist. There is also a fatty tumor below the distal half of the left clavicle, smaller than the patient's fist. She had been nervous for several years. Her last baby was born dead eighteen years ago and she was nervous before then. Six years ago she began to grow weak and unable to do her work. In spite of good appetite she had lost in weight from 133 to 85 pounds. She cries easily. About twenty-seven years ago she noticed an enlargement of her thyroid gland. Six years ago she noticed a burning upon urination and she had pus in the urine last spring following tenderness in the left kidney region.



Past History: Sick headache and bilious vomiting were present in childhood. She matured at sixteen years of age; menses were regular and painless. She has had mumps, whooping cough, chickenpox and scarlet fever. She was married at twenty-two years of age, and is the mother of seven living and two dead children. The right breast was removed when the patient was twenty-two years of age by radical mastectomy. The patient had an attack of appendicitis at that time also, but subsequent attacks grew fewer and milder and the symptoms finally disappeared.

Family History: The father died at eighty-four years of age from old age, and the mother died at fifty-eight years of age from a stroke. There were four brothers and seven sisters. One sister died from pulmonary tuberculosis, one from a toxic goiter, and one from a blood clot in the heart. One brother and one sister died of typhoid fever before the patient was born.

Physical Examination: The patient is very much under normal weight at 85 pounds. She is nervous and has a marked tremor of the fingers extended at arms length. The thyroid gland is enlarged and contains a palpable firm nodule on the left side. The right breast has been removed as shown by the scar from the axilla to below the breast. There is a small lipoma below the distal half of the left clavicle, slightly smaller than the patient's fist. A pedunculated tumor as large as a head hangs from the upper anteromedian aspect of the left thigh below the inguinal region.

Diagnosis: Toxic adenoma of the thyroid gland; lipoma below the distal half of the left clavicle; pedunculated lipoma of the upper anteromedian aspect of the left thigh.

Operation: The pedunculated lipoma was removed under one per cent procaine. The pedicle was divided with sharp dissection. Bleeders were ligated with No. 2 plain sutures, and the paniculus was coapted with No. 2 plain sutures. The skin was closed with No. 2 plain running sutures. A sterile gauze dressing was held in place with adhesive tape.

The postoperative course was uneventful except for rather slow healing, due to some infection in the tumor which was beginning to show signs of breaking down and oozing serous material from the bottom end. The patient refused to have her goiter or other tumor removed.

OLD AGE ASSISTANCE GRANTS: CORRECTION

The January issue of the JOURNAL of the Iowa State Medical Society carried an editorial on old age assistance grants, prepared by Dr. Harold J. McCoy, Medical Director, and Dr. Channing G. Smith, Medical Consultant. The second sentence of the editorial stated that approximately one-fourth of all money being received by 14,121 old age pensioners was being expended for chronic medical treatment. The statement should have been that approximately one-fourth of all persons receiving old age assistance grants receive an extra allowance for medical treatment of chronic conditions. The figure of 14,121 persons is the one-fourth who do receive this allowance. Readers of the JOURNAL are urged to note this important correction.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

A SINGLE CARCINOMATOUS POLYP OF THE SIGMOID COLON

A. B. NESLER, M.D., and LUKE FABER, M.D.
Dubuque

During the last decade, considerable information has been acquired about polyps of the gastro-intestinal tract. While both benign and malignant polyps may arise in any portion of the intestine, the sigmoid colon is most commonly involved. The symptomatology is not distinctive and because some of the growths while at first benign ultimately may undergo malignant changes, it is important to keep them in mind as possibilities in patients with vague abdominal symptoms. The case to be presented is one of a single malignant polyp of the sigmoid which probably had its origin in a benign adenomatous polyp.

CASE REPORT

Chief Complaint: The patient, a white woman forty-three years of age, was admitted to the hospital August 7, 1939 with a complaint of "soreness and pain in the pit of the stomach."

Family History: The patient's mother died of "leakage of the heart;" her father was alive and well at eighty-seven years of age. Six sisters were alive and well, and one brother died of Bright's disease. There was no history indicating that other members of the family might have had a condition similar to that of the patient.

Past History: Except for measles in childhood, the patient had always been well. However, she had had trouble with intestinal gas for years and stated that at times she had had soreness in her intestines which was aggravated by being on her feet for long periods at her work as a laundress. She had not been constipated and had never noticed bleeding or actual pain.

Present Illness: The patient had felt relatively well until about a week before admission when she developed gastric distress and pain which increased in severity and which, after five days, required one-eighth grain of morphine sulfate to control. However, she was still conscious of soreness and pain especially when lying on the left side and she continued to belch considerable gas. She had not been nauseated and her appetite was fair to good. She was advised to enter the hospital for further study.

Physical Examination: The patient's temperature was 98 degrees; the pulse was 110 and the respirations were 20 per minute. The patient was a pale, well-nourished woman, apparently of the age stated. The head examination was essentially negative. The upper teeth were false and there were two bridges in the lower jaw. The mouth hygiene was good. There was no cervical adenopathy and the thyroid gland was not enlarged. The breasts were poorly developed and no nodules could be felt. The lungs and heart were entirely negative. The blood pressure was 120/80. Half way between the xiphoid and the umbilicus, there was a hard irregular mass which was about five centimeters in diameter. This was painful on pressure. The liver and spleen could not be palpated. A rectal examination showed the uterus and adnexa to be normal and nothing unusual was noted in the rectum. The blood examination showed 3,100,000 red blood cells and a hemoglobin of 53 per cent. Stool examinations showed no blood and no evidence of pancreatic dysfunction.

Course in Hospital: The patient was given two direct blood transfusions of 700 cubic centimeters of blood, and ten days after admission an exploratory laparotomy was decided upon.

Operative Notes: A right paramedian incision was made high in the abdomen. The peritoneal cavity was difficult to open because of adhesions between the liver and the abdominal wall and between the stomach and colon. The liver was studded with large numbers of umbilicated metastatic tumors, but because of adhesions, the abdomen was closed after only a limited search for the primary neoplasm.

Postoperative Diagnosis: Metastatic carcinoma of the liver.

Course in the Hospital: The microscopic studies showed metastatic adenocarcinoma. The patient was made as comfortable as possible, but failed gradually and died two months after admission.

Final Clinical Diagnosis: Metastatic adenocarcinoma of the liver.

Necropsy Abstract: The body was that of an emaciated white woman. There was a recently healed surgical wound in the upper abdomen beneath which a nodular, hard mass could be felt. On opening the peritoneum, the abdominal cavity was found to contain 1,200 cubic centimeters of clear amber fluid. The liver's edge extended to the level of the umbilicus and adhesions bound it to the surgical wound; bands of adhesions extended from the splenic flexure of the colon to the greater curvature of the stomach. Each side

of the thoracic cavity contained 300 cubic centimeters of clear straw-colored fluid. The heart and lungs were essentially negative. The liver weighed 3,000 grams and much of the organ was made up of large and small gray translucent metas-



Fig. 1. Cross section of the liver showing almost complete replacement by metastases.

tases. (Fig. 1.) The gallbladder, bile ducts, spleen, adrenal glands, pancreas, genitalia, stomach and small intestines were normal. On opening the sigmoid, a single, pedunculated hard polyp measuring 3.5 cubic centimeters in its longest di-



Fig. 2. Malignant polyp of the sigmoid.

ameter was found. (Fig. 2.) Outside its attachment to the mucosa, there were two small nodules beneath the serosa and other metastases were found along the aorta in the lymph nodes. On microscopic study, all growths showed adenocarcinoma.

Anatomic Diagnosis:

1. Pedunculated carcinomatous polyp of the sigmoid; invasion of the wall of the sigmoid; metastases to the periaortic lymph nodes and to the liver.

2. Operation (exploratory laparotomy and biopsy): ascites; bilateral pleural effusion; emaciation.

Comment: The case is of interest because it is an example of the well known fact that not infrequently the symptoms due to metastases rather than to the primary malignant growth cause the patient to consult a physician. However, it is rare that the metastases almost completely replace the liver before medical advice is sought. Probably the patient did have symptoms due to the original polyp, but they were so slight that she neglected having anything done about them. From the appearance of the polyp it may be assumed that it was present a long time if not actually congenital. Therefore, it can be surmised that for a considerable period the lesion was benign. The hope of cure in this case rested upon its detection and removal during this period before the lesion underwent malignant change and formed metastases.

GENERAL DISCUSSION

Polyps occur in the stomach and small intestine but are usually encountered in the colon, and especially the sigmoid colon. Saint,¹ working at the Mayo Clinic, gives the following distribution in the various parts of the large bowel:

Cecum	8	Sigmoid colon	20
Ascending colon	6	Rectum	5
Transverse colon.....	3	Part of colon	
Descending colon.....	5	unspecified	4

Bargen² classifies polyps of the large intestine into three groups: first, those resulting from chronic ulcerative colitis; second, adolescent type (congenital and disseminated) which is prone to be familial; and third, senescent or degenerative polyps occurring late in adult life. The first consists of mucosal tags or strips of mucosa pushed into the lumen of the gut by the healing process. It is an acquired type of polyposis and also has been termed pseudopolyposis. The adolescent type occurs early in life, but symptoms are frequently delayed until the third decade. In this condition, a portion or the entire colon may be studded with small adenomas, often with long pedicles separated by normal areas of mucosa. Frequently there is a history of a parent having had a similar condition. The third type is similar to the second, but occurs later in life and the polyps are single or relatively few in number. Studies of the last decade indicate that each type of polyp,

while having benign stages, is potentially malignant and not infrequently does become carcinomatous. Therefore, whenever possible, they should be eradicated as soon as discovered.

The diagnosis is made by taking a careful anamnesis. The history indicating chronic ulcerative colitis is important in establishing the inflammatory type of polyps. Without such a history, one of the other two types, depending upon the age of the patient, is suggested. The general examination usually gives little information, but digital examination of the rectum should never be omitted. In chronic ulcerative colitis, the wall of the rectum is rigid and the polyps are palpable. In the other two types, the rectal wall retains its resilience and if the rectum is involved, the soft tumors can be felt. In some cases, only a single pedunculated tumor may be felt. However, the diagnosis usually demands sigmoidoscopic, roentgenoscopic and roentgenographic examinations. In the latter, the double contrast method is most efficient and accurate. When these procedures are diligently carried out, a correct diagnosis usually can be made.

The treatment of adenomatous polyps is based upon the realization of their potential malignancy. This is also true of the pseudopolyps, but to a lesser degree; if the cause of the inflammatory process can be removed, the polyps may regress. However, if this does not occur, surgical methods may be required. The treatment of single or multiple polyps is by transcolonic removal as suggested by Mayo and Smith.³ The colon is resected if only a portion is involved by disseminated polyps. When the entire colon is involved, colectomy was formerly advised, but Mayo and Wakefield⁴ now advocate fulguration of the adenomas in the rectum and lower sigmoid and then ileosigmoidostomy with removal of the remainder of the colon in stages. As in all types of benign lesions which are prone to undergo malignant change, every effort should be made to discover them while they are still benign and to eradicate them at this stage.

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STATE DEPARTMENT OF HEALTH

Walter Biering

Communicable Disease Review of 1941

The accompanying line and bar diagrams present a graphic summary of certain communicable diseases as reported in Iowa during the months of 1941. The diseases include pneumonia, diphtheria, smallpox, measles, whooping cough, meningococcus meningitis, poliomyelitis, scarlet fever and typhoid fever.

Figure 1 is a histogram presenting the number of cases of all forms of pneumonia as reported

disease reports as forwarded to the State Department of Health from attending physicians, local health officers, county and district health services during the nine-year period from 1932 through 1940.

It will be noted (Figures 2 and 3) that the reported prevalence of diphtheria and smallpox in 1941 was far below the average of the preceding nine-year period. On the other hand, measles and

PNEUMONIA

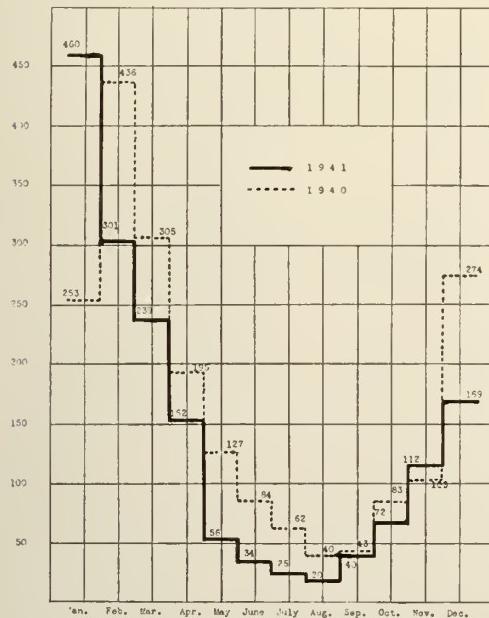


FIG. 1. PNEUMONIA IN IOWA 1941

Cases as reported by months during 1941 compared with reported prevalence in 1940.

from January through December of 1941, compared with similar information for the preceding year, 1940. The other graphs (Figures 2 to 9) compare the reported incidence of the disease during months of 1941 with the average monthly figure or expected number, based on communicable

DIPHTHERIA

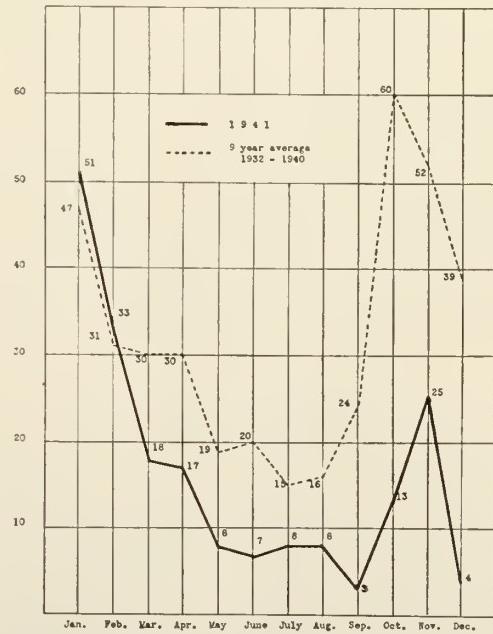


FIG. 2. DIPHTHERIA IN IOWA 1941

Cases as reported by months during 1941 compared with average for the nine-year period 1932-1940.

whooping cough (Figures 4 and 5) showed unusual occurrence as compared with the period from 1932 through 1940. The graphs for meningitis, poliomyelitis, scarlet fever and typhoid fever portray a lower incidence in 1941 than the previous nine-year average (see Figures 6, 7, 8 and 9).

SMALLPOX

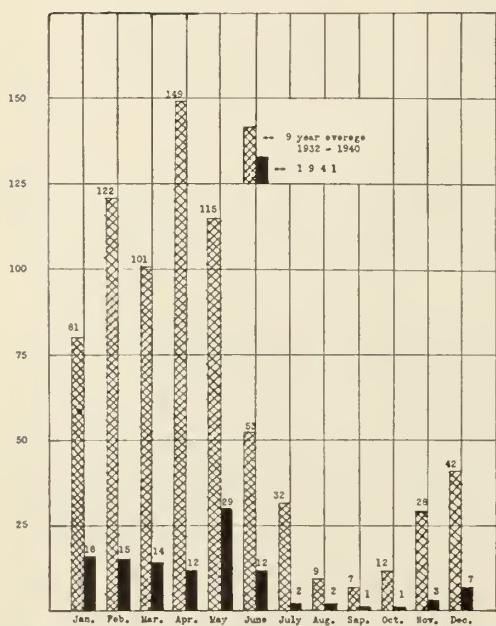


FIG. 3. SMALLPOX IN IOWA 1941

Number of cases as reported by months in 1941 as compared with the expected number, or average for the nine-year period, 1932-1940.

WHOOPING COUGH

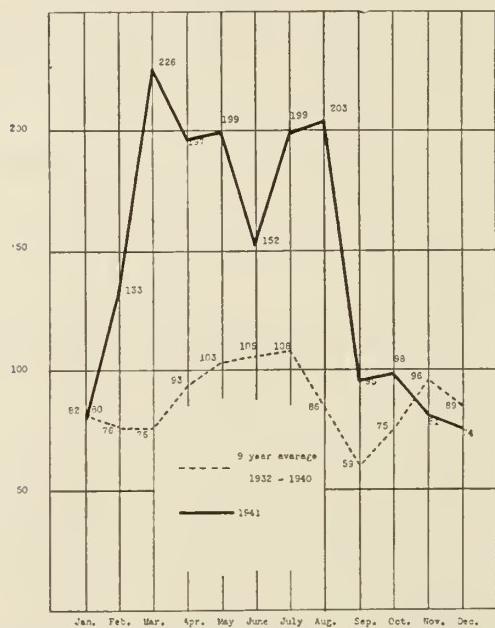


FIG. 5. WHOOPING COUGH IN IOWA 1941

Line graph shows unusual prevalence in 1941 compared with expected number of cases as based on the average for 1932-1940.

MEASLES

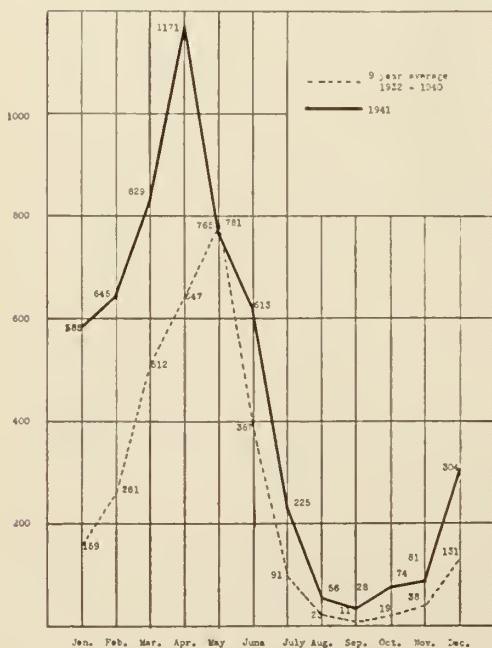


FIG. 4. MEASLES IN IOWA 1941

Line diagram indicates reported cases by months in 1941 in comparison with average reports for the previous nine years.

MENINGITIS

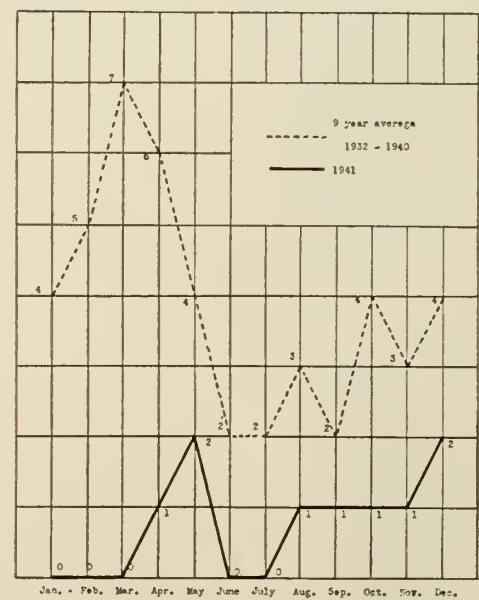


FIG. 6. MENINGITIS IN IOWA 1941

Cases as reported by months in 1941 and monthly average for the preceding nine years, 1932-1940.

POLIOMYELITIS

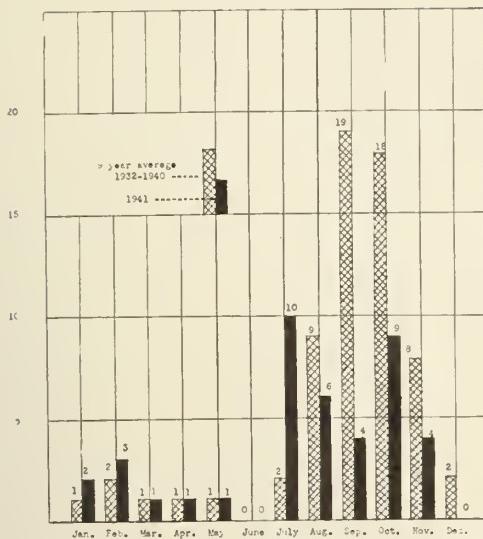


FIG. 7. POLIOMYELITIS IN IOWA 1941

Comparison of reported cases during 1941 with the average of monthly reports for the period 1932-1940.

TYPHOID FEVER

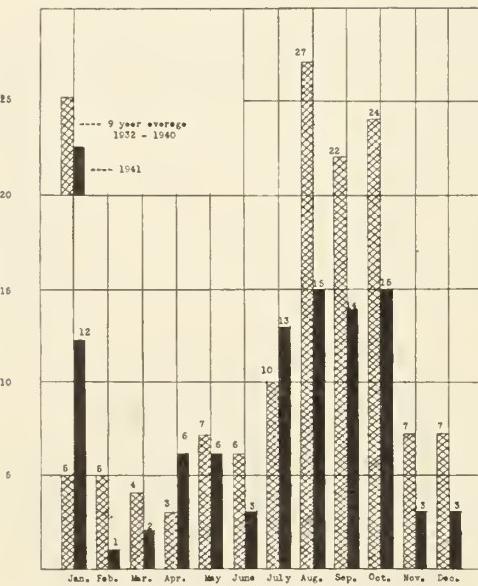


FIG. 9. TYPHOID FEVER IN IOWA 1941

Reports for 1941 compared with the expected number or average for the nine-year period 1932-1940.

SCARLET FEVER

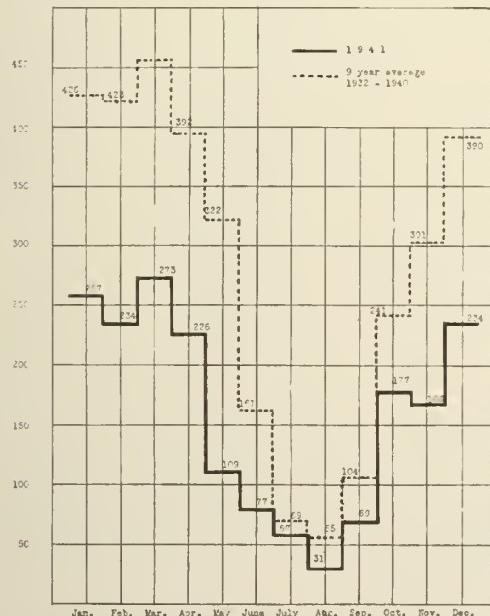


FIG. 8. SCARLET FEVER IN IOWA 1941

Cases as reported by months of 1941 compared with the expected number based on the previous nine-year period.

MEDICAL MEETINGS ON PNEUMONIA

Meetings for showing of a technicolor film on pneumonia were held in January, 1942, with time and place as follows: January 12, Des Moines, Veterans' Hospital (staff and nurses) and Iowa Methodist Hospital (staff and nurses); January 13, Chariton and Creston, Lucas and Union County Medical Societies; January 14, Leon and Centerville, Decatur and Appanoose County Medical Societies; January 15, Fort Dodge, Lutheran Hos-

PREVALENCE OF DISEASE

Disease	Most Cases Reported From		
	Dec. '41	Nov. '41	Dec. '40
Diphtheria	8	25	8
Scarlet Fever	234	166	323
Typhoid Fever	3	3	4
Smallpox	7	3	8
Measles	304	81	466
Whooping Cough ...	74	81	123
Brucellosis	35	45	16
Chickenpox	411	271	422
German Measles....	4	2	4
Influenza	7	4	247
Mumps	303	222	235
Pneumonia	169	112	274
Poliomyelitis	0	4	11
Tuberculosis	65	52	77
Gonorrhea	69	82	103
Syphilis	195	179	206

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ISSUED MONTHLY

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CHEMOTHERAPY IN PERITONITIS

"Astounding" would seem to be the appropriate word to use in describing the miraculous results which continue to be reported from the use of the sulfonamide drugs. No other form of therapy in the history of medicine has had such a meteoric use in such a short space of time. Originally employed for the treatment of puerperal sepsis, one after another disease has been added in which these drugs have been demonstrated to exert a beneficial action, often of life-saving proportions, until at present scarcely any infection is encountered by the physician in which he does not consider primarily the possibilities of chemotherapy. In the earlier developmental stages the objective sought was an optimum bacteriostatic concentration of the drug in the tissues by oral or parenteral administration. More recently topical application, both for prophylactic and therapeutic reasons, has sprung into the limelight. An ointment has been devised for use in the eye and for skin lesions. A spray to produce a coagulin and to prevent infection is being experimentally tested in the treatment of burns. The crystalline powder itself has been proved invaluable in compound fractures, and dentists customarily employ it following tooth extractions.

Now come reports of the value of sulfonamide drugs in another of those conditions which has taken a heavy toll of human life—peritonitis. There are other reports available, but the one we wish particularly to cite is that of Mueller and Thompson in the January 17, 1942 issue of the *Journal of the American Medical Association*. In an appended note these authors state that 400 patients with appendicitis were operated upon at the Roosevelt Hospital in New York between Jan-

uary, 1940, and January 5, 1942, without mortality. In 133 of these sulfanilamide was used intraperitoneally. Sulfanilamide powder was placed in sterile test tubes in known amounts and was sterilized further by means of dry heat for two hours at a temperature of 140 degrees, centigrade. The powdered drug was sprinkled into the peritoneal cavity as near the focus of infection as possible in a dosage calculated at eight per cent of the body weight in pounds to obtain the number of grams to be used in the average case in which drainage is employed. Thus, the dose for a man weighing 150 pounds would be twelve grams. The authors warn that in using doses of this size, preoperative and postoperative administration of sulfanilamide should be avoided if possible.

The blood level reached by such doses of intraperitoneal sulfanilamide has been on the average of seven milligrams per cent in from ten to eighteen hours. A gradual fall to zero occurs in the next three or four days. Concentrations as high as 300 to 800 milligrams per one hundred cubic centimeters have been obtained from peritoneal fluid for as long as forty hours postoperatively. The point is stressed that by no other method of administration can such high levels be obtained in the peritoneal cavity and that this is the active factor in controlling the infection. No serious toxic effects were observed in this series, although in a following paper and in the discussion, the risks of hepatitis were debated at length. Apparently this complication has occurred and on occasion has led to serious illness and even death.

Appendicitis ranks second in the list of the causes of death in children under fifteen years of age, being preceded only by deaths from accidents. While it is not to be expected that the use of the powdered sulfonamides intraperitoneally will save the lives of all victims of peritonitis, nevertheless it is an added method of treatment which well merits the serious consideration of every surgeon.

VICTIMIZING OF PHYSICIANS

The decreased importation of narcotic drugs and an active enforcement program have virtually eliminated illicit sources of supply for addicts, and the transient addict is finding it necessary to victimize legitimate physicians to satisfy his habit. The Criminal Investigation Division of the Iowa State Department of Public Safety, under the direction of R. W. Nebergall, is making every effort to control the evil of the transient addict, but the cooperation of ethical practicing physicians is an important factor in the apprehension of these individuals. The following cases, quoted from a communication from Mr. Nebergall, illustrate the

manner in which these addicts operate, and it is hoped that the publicizing of their methods will be of value in eliminating this menace.

"In a report under date of July 25, 1941, a doctor in southeastern Iowa reports, 'On July 16, someone broke into my office, taking 600 tablets of morphine sulphate $\frac{1}{4}$ grain and about 950 tablets of hyoscine. On July 15 at about eleven a. m. two people came to my office—a lady about 5 feet 7 inches, dark-complexioned, black hair and a very hard looker. The man was of light complexion, sandy hair, 5 feet 10 inches, slender and rather nice looking. In my opinion, these people were getting the arrangement of my office * * *'.

"A doctor in south central Iowa reports that on July 5 a man giving his name as W. R. Reed came into his office complaining of pain in the kidney and showed signs of considerable suffering. The doctor administered a hypodermic of $\frac{1}{2}$ grain of morphine and gave him three tablets of the same to take if the pain was not relieved. This subject reported again to the doctor on the 6th and 7th of July and he gave him each time four $\frac{1}{4}$ grain morphine tablets to be taken every three hours if needed to relieve the pain, and he further made arrangements for this individual to come back for the purpose of having an x-ray examination made. The doctor also gave the subject a prescription of uro-tropin to be taken to the drug store for filling. The subject did not call at the drug store with the prescription, neither did he come back for the x-ray examination. Shortly after this, the doctor discovered that the bottle in his case which he supposed contained about 100 morphine tablets had only 22 tablets left in it.

"Another doctor in a south central Iowa town reports that at about 12:45 on July 25, 1941, a man giving his name as Reed called at his office and advised him that he was a patient of a doctor in a neighboring town who was away on his vacation. This subject stated that he was having an attack of renal colic, and that the other doctor referred to had treated him in two previous attacks which had lasted from five to six hours each. The man appeared to be in considerable pain. The doctor administered $\frac{1}{4}$ grain of M. S. and while cleaning his needle noticed this man put his hand in his pants pocket and keep it there. The doctor caught hold of him and succeeded in getting his bottle, but it was empty. As the doctor went to the telephone to call the sheriff, the man said, 'I am sick at my stomach,' made for the door, ran down, jumped into his car and was gone immediately, and the doctor's 100 $\frac{1}{4}$ grain M. S. tablets with him.

"In another report, a doctor in north central

Iowa reports that a stranger appeared at his office one evening, gave the name of J. C. Clifford and his home was Portland, Oregon, and stated that he had come by way of Grand Island, Nebraska, where he had secured a 20 tablet tube of H. T. of morphine $\frac{1}{2}$ grain. This patient claimed that he had been operated on two years ago for cancer of the colon, that metastases were found on the liver, that radium and x-rays had been used and that he had also taken the frozen treatment. He claimed to be en route to the Mayo Clinic at Rochester, Minnesota, having come up from Des Moines where he claimed to be acquainted. He had a large scar in the right lower quadrant where he said that the tumor was found and a long upper abdominal scar extending down from the gall-bladder area through which he claimed they found cancer on the duodenum and liver. This subject attempted to obtain an additional supply of narcotics.

"In another case reported from our sister state of Nebraska, a man giving the name of J. C. Clifford called upon a doctor claiming that he had a federal narcotic permit entitling him to obtain narcotics and that his registry number was 5194."

Many more cases of this nature could be cited and the accumulation of these complaints appears to support the prediction that the transient addict problem will require more than passing attention, not only because of the narcotic problem involved but because of the other crimes which these addicts commit in order to finance their travels over the country.

TUBERCULOSIS IN CHILDREN

That reinfection tuberculosis or second phase tuberculosis or consumption can result from an endogenous source is demonstrated by a study of Johnston, Howard, Smith and Douglas of Detroit. A group of 828 children who were reactors to tuberculin were removed from contact and placed in foster homes. Ten cases of reinfection tuberculosis were discovered on the first examination, but twenty-three of the children developed the adult type of tuberculosis after contact was broken and all possible opportunities for exogenous reinfection were eliminated.

Of the 828 children who were reactors, 380 gave a definite history of exposure to a known case of tuberculosis, and 448 of the reactors gave no history of contact. It is striking that eighteen of the twenty-three children who developed reinfection tuberculosis were from the group who gave a history of known exposure.

It seems obvious that endogenous reinfection occurred in this group of reactors and that a defi-

nite exposure promises a greater probability of reinfection than the mere possession of a positive tuberculin test. It is concluded that the larger and repeated exposure of the child in contact resulted in a more extensive infection and a less stable healing process, than in those receiving a small dose from a casual exposure.

Of unusual interest is the fact that of the twenty-three children who developed endogenous reinfection, seventeen were girls, and of these, fourteen developed the lesion within three years of the first menstrual period. It is common knowledge that the most serious cases of pulmonary tuberculosis occur at puberty. Metabolic studies of puberty by the authors have demonstrated that the onset of menstruation in girls is accompanied by a depression in the retention of calcium and nitrogen, and that the menarche is preceded by a rise and followed by a fall in basal metabolism. It seems logical to assume that the depletion of reserves plays a definite rôle in the increase of disease at this period of life.

This careful study demonstrates that endogenous reinfection does occur, more frequently in those patients with a history of direct contact, and more frequently in females. Metabolic studies indicate that there are physiologic reasons for the high incidence of serious reinfection tuberculosis during adolescence. The study clearly indicates the necessity for a high protein intake during adolescence. According to Johnston and his co-workers, fifteen per cent of the calories should be in the form of proteins. The rapid growth and development in this period of life demand a high calcium intake and the daily administration of cod liver oil.

A TRIBUTE TO THE DOCTOR

The birth records which the doctor filled out for "his" babies in days gone by have now come into their own. These little documents, often completed in the middle of the night under trying conditions, have become the foundation structure upon which the United States government is building the entire national defense system. Proof that "his" babies are American citizens is what the doctor gave them when he made out their certificates, and the fact that the government goes to the physician's record for this evidence is, without exception, one of the highest compliments to be paid the medical profession. Here is another example of the unwavering confidence of the government in the integrity of the American physician, and it compensates for those early morning sessions when accomplishing the certificate seemed a senseless nuisance.

SIXTH NATIONAL SOCIAL HYGIENE DAY

Five years of Social Hygiene Day celebrations have resulted in five years of progress in the control of syphilis and gonorrhea. Progress has been slow but sure, and now as we approach Wednesday, February 4, 1942, Sixth National Social Hygiene Day, we realize anew the tremendous importance of continuing our fight against the spread of these two plagues which attack the efficiency of our military forces and undermine our community strength.

Every doctor knows that syphilis and gonorrhea are among the gravest dangers which threaten national health and strength. We know that syphilis alone has caused more deaths than all the wars in history. We know that gonorrhea, several times more prevalent than syphilis, cripples limbs, prevents parenthood and blinds babies. We know these facts, but do we fulfill our responsibility to mankind by disseminating this information on all possible occasions? Physicians, knowing only too well the tragic results of syphilis and gonorrhea, should be willing, and even anxious, to accept invitations to speak before their local groups in an effort to enlighten a public which is genuinely interested.

The theme for the 1942 Social Hygiene Day is "Keep America Strong, Help Build Better Health", and special attention is being directed toward the full realization of the menace of organized prostitution in areas adjacent to concentrations of armed forces and in industrial centers. Physical fitness, not only of military men and defense workers, but also of civilians, will be a most important factor in determining the effectiveness of our defense effort. Progress in national control will be cancelled and the declining rate of syphilis and gonorrhea will be swiftly reversed if we do not immediately redouble our efforts in repressing the spread of these conditions.

Following last year's successful observance of Social Hygiene Day, six great regional conferences will be held on February 4 throughout the nation, in Boston, New York, Cincinnati, Jacksonville, Florida, Oklahoma City and Portland, Washington. Nationally known speakers, including representatives of the United States Army and Navy, the American Social Hygiene Association, and many state and community leaders, will participate in the programs. Let us remember, however, that February 4 is only a focal point. Attention to the problem must be maintained the year around. One hundred and thirty million people should be told why syphilis and gonorrhea must be driven out and how it can be accomplished. The task is a gigantic one; we are sure Iowa practitioners will gladly assume their share in the fulfillment of it.

Income Tax Returns

Many significant changes have been made in the federal income tax law, and tax rates will be much higher than they have been in the past. For that reason an effort has been made to prepare a comprehensive summary of steps to be followed by physicians in determining their liability. The federal government rightly desires that every citizen shall pay his just due, but it does not want anyone to pay more than he should. Consequently, tables have been prepared showing the many items which are allowable deductions on both federal and state returns. The JOURNAL hopes they will help each doctor prepare his return more easily and accurately.

FEDERAL

Liability for filing return.

All single persons with gross income of \$750.00 or more for calendar year 1941; all married persons with gross income of \$1,500.00 for same period.

Income. A physician's gross income is the total amount of money received by him during the year for professional services, regardless of when the services were rendered, plus money he has received as profits from investments and speculation, or as compensation and profits from other sources. Wages paid to doctors who are members of the armed forces are taxable.

Joint returns are allowable.

Credit for dependents.

\$400.00 for each dependent.

Personal exemption—\$750.00 for single person; \$1,500.00 for head of family.

Allowable Deductions

Automobile. When one automobile is used both professionally and socially, the doctor should estimate what percentage of the use is for professional service, and then charge that percentage of his automobile expense as an allowable deduction.

Car for professional use only.

Gasoline (minus tax).

Oil, grease and repairs.

Tires.

Anti-freeze mix.

Garage or parking lot rental.

License fee.

Chauffeur's wages.

Miscellaneous.

State gas tax, 3c per gallon.

Automobile for family use.

License fee.

State gas tax, 3c per gallon.

STATE

Liability for filing return.

All single persons with net income of \$1,000.00 or more for 1941; all married persons with net income of \$1,500.00 for same period; and all persons with a gross income of \$3,000.00 or more.

Income. Gross income includes the money received by the physician for services rendered, plus such money as he may receive from investments and speculation and other sources. Money received for services rendered prior to 1934, however, is not taxable.

Joint returns are allowable.

Credit for dependents.

\$5.00 for each dependent (subtracted from tax).

Personal exemption—\$10.00 deduction from tax for single person; \$20.00 deduction from tax for married couple.

Allowable Deductions

Automobile. Same as federal.

FEDERAL**STATE**

Business expenses.
 Attorney's fees (in defense of malpractice suit).
 Auditing.
 Bonuses.
 Collection of accounts.
 Fuel.
 Light.
 Moving to new business location.
 Rent.
 Repairing and maintenance of professional premises and equipment.
 Social Security tax on employees.
 Telephone and telegraph.
 Unemployment tax (if over eight employees).
 Utilities repairs.
 Wages.
 Water.
 Miscellaneous.
 When a doctor has an office in his residence, he must estimate what percentage of his rent and maintenance expense is chargeable to it and how much to residence.

Office supplies. (Amounts currently spent for books, furniture, professional instruments and equipment, the "useful life of which is less than one year" may be deducted.)

Bank and check charges.
 Dressings.
 Drugs and chemicals.
 Instruments (not having lasting value).
 Medicines and supplies.
 Papers and magazines for waiting room.
 Postage.
 Professional journals.
 Stationery.
 Miscellaneous.

Office supplies. Same as federal.

Contributions.

Contributions. Same as federal.

Charitable (Charity funds, community chests, hospitals, Red Cross, tuberculosis seals, war relief funds).
 Educational (cancer campaign, college endowments, etc.).
 Religious.
 Scientific.
 Contributions or assessments paid to Chambers of Commerce and professional associations and made for business purposes.
 Gifts required by your profession and given for business reasons.

Depreciation (To be determined by useful life of article).

Depreciation. Same as federal.

Automobile (professional).
 Furniture (office).
 Equipment (office).

Insurance premiums.

Insurance premiums. Same as federal.

Automobile (proportionate to business use).
 Fire and theft on business property.
 Malpractice.
 Office or other professional equipment.

FEDERAL

Interest on indebtedness.
 On borrowed money.
 Owed on lien or mortgage note on home.
 Other notes.

Losses.
 Fire, casualty and theft losses to the extent that they are not compensated for by insurance.
 Faulty driving (but not wilful negligence).
 Damages, court costs and other expenses paid by you in connection with civil lawsuits concerning your profession.

Miscellaneous.
 Legal expense paid by you for drawing contract of your employment.
 Miscellaneous or unusual expenses paid by you which were directly necessary to earn your income.

Society dues.
 State Medical Society.
 County Medical Society.
 Other professional societies.
 Civic clubs.

Travel.
 Traveling expense to medical meetings and conventions is deductible, but the expense of attending postgraduate courses is not, nor is the expense of going to take an examination for certification by a special board.

Taxes.
 Federal tax on admissions.
 Gasoline (3c per gallon).
 Narcotic license.
 General property taxes.
 Telephone and telegraph message taxes.
 Social Security and unemployment taxes paid on employees.
 State income tax for 1940.
 Iowa sales tax of 2 per cent.
 Federal tax on safety deposit box.

Computation of tax.
 From gross income, subtract all authorized deductions to obtain net income figure. From net income subtract personal exemption and credit for dependents. The balance will be the surtax net income. Deduct from this figure interest on government obligations and the earned income credit. The normal tax will be four per cent of this last figure. The surtax will be determined by the amount of surtax net income, the rate depending upon the size of this figure. Complete instructions are to be found on each blank.

STATE

Interest on indebtedness. Same as federal.

Losses. Same as federal.

Miscellaneous. Same as federal.

Society dues. Same as federal.

Travel. Same as federal.

Taxes.
 Federal tax on admissions.
 Gasoline (3c per gallon).
 Narcotic license.
 General property taxes.
 Telephone and telegraph message taxes.
 Social Security and unemployment taxes paid on employees.
 Federal income tax for 1940.
 Sales tax of 2 per cent.
 Federal tax on safety deposit box.

Computation of tax.
 Subtract allowable deductions from the gross income to obtain the net income figure. The tax rate is shown on the forms and is briefly, one per cent on the first \$1,000.00, two per cent on the second \$1,000.00, etc. On incomes of \$4,000.00 or more, five per cent tax is paid. From the tax as figured, a deduction of \$10.00 may be made for a single person, \$20.00 for a married couple, and \$5.00 for each dependent.

Medical Preparedness *

REMEMBER PEARL HARBOR

On December 7 everyone in the United States was astounded to learn of the Japanese attack on Pearl Harbor. On January 2 we were saddened to hear that Manila had been taken over by the Japs, and as this is written we are confronted with the fact that Kuala Lumpur has fallen and that Singapore is gravely menaced. All of this adds up to the fact that the United States of America are in a war which will not be an easy one to win. No nation ever entered upon a war unless it was convinced that it would win. This is the philosophy we and our allies are facing. Our own conviction dictates that we are in this war for the sole purpose of winning and to prevent the periodic recurrence of dangerous conflicts.

Many members of our profession have asked us what they shall do. You have all been notified of the organization of the Procurement and Assignment Service which has been formed to insure adequate medical, dental and veterinary personnel for the various governmental agencies. As has been stated, it is hoped no legislation will be required to force members of these professions into service, that volunteer enlistments will provide sufficient personnel. It is no military secret that in order to provide adequate medical personnel for our Army, Navy and Marine services, approximately 35,000 additional physicians will be required during the next year. Personnel is coming in by voluntary enlistments; however, it is slow. There is a shortage. Our advice is: if you feel that your community can spare you, then enlist. Please be impartial in the evaluation of your services.

PROCUREMENT AND ASSIGNMENT FORMS DISCARDED

The following telegram was received January 17 from Dr. Olin West. In effect it countermands all requests previously made to physicians to fill in the enrolment form for the Procurement and Assignment Service. It can easily be understood that it is difficult to make infallible long-range plans under present conditions, and undoubtedly circumstances have forced a new course of action. Dr. West's telegram reads as follows:

"I have been officially informed that because of constantly increasing demands on the Procurement and Assignment Service in Washington and because of the growing needs of the Army and Navy for personnel it has become necessary for a new form to replace the form that recently appeared in the Journal of the American Medical Association and that it is expected that the new form will be ready for

release within the very near future. It is therefore requested that the form which appeared in the American Medical Association Journal and which was reproduced by official agencies of state associations in a number of states be discontinued. It is my understanding that complete information concerning the new form will soon be available. An expression of grateful appreciation of the splendid cooperation and helpful kindnesses of state and county committees and state secretaries is hereby extended in behalf of the American Medical Association and its Committee on Medical Preparedness. The executive officer of the Procurement and Assignment Service has today expressed to me similar appreciation on behalf of his office and of the Procurement and Assignment Service."

RECOMMENDATIONS TO ALL PHYSICIANS WITH REFERENCE TO THE NATIONAL EMERGENCY

I. Medical Students

A. All students holding letters of acceptance from the Dean for admission to medical colleges and freshmen and sophomores of good academic standing in medical colleges should present letters or have letters presented for them by their deans to their local boards of the Selective Service System. This step is necessary in order to be considered for deferment in Class II-A as a medical student. If local boards classify such students in Class I-A, they should immediately notify their deans and if necessary exercise their rights of appeal to the Board of Appeals. If, after exhausting such rights of appeal, further consideration is necessary, request for further appeal may be made to the State Director and if necessary to the National Director of the Selective Service System. These officers have the power to take appeals to the President.

B. Those junior and senior students who are disqualified physically for commissions are to be recommended for deferment to local boards by their deans. These students should enroll with the Procurement and Assignment Service for other assignment.

C. All junior and senior students in good standing in medical schools, who have not done so, should apply immediately for commission in the Army or the Navy. This commission is in the grade of Second Lieutenant, Medical Administrative Corps of the Army of the United States or Ensign H.V. (P) of the United States Navy Reserve, the choice as to Army or Navy being entirely voluntary. Applications for commission in the Army should be made to the Corps Area Surgeon of the Corps Area in which the applicant resides and applications for commission in the Navy should be made to the Commandant of the Naval District in which the applicant resides. Medical R. O. T. C. students should continue as before with a view of obtaining commissions as

*From the Committee on Medical Preparedness.

First Lieutenants, Medical Corps, upon graduation. Students who hold commissions, while the commissions are in force, come under the jurisdiction of the Army and Navy authorities and are not subject to induction under the Selective Service Act. The Army and Navy authorities will defer calling these officers to active duty until they have completed their medical education and at least twelve months of internship.

II. Recent Graduates

Upon successful completion of the medical college course, every individual holding commission as a Second Lieutenant, Medical Administrative Corps, Army of the United States, should make immediate application to the Adjutant General, United States Army, Washington, D. C., for appointment as First Lieutenant, Medical Corps, Army of the United States. Every individual holding commission as Ensign H.V. (P), U. S. Navy Reserve, should make immediate application to the Commandant of his Naval District for commission as Lieutenant (J.G.) Medical Corps Reserve, U. S. Navy. If appointment is desired in the grade of Lieutenant (J.G.) in the regular Medical Corps of the U. S. Navy, application should be made to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

III. Twelve Months Internes

All internes should apply for a commission as First Lieutenant, Medical Corps, Army of the United States, or as Lieutenant (J.G.), United States Navy or Navy Reserve. Upon completion of twelve months internship, except in rare instances where the necessity of continuation as a member of the staff or as a resident can be defended by the institution, all who are physically fit may be required to enter military service. Those commissioned may then expect to enter military service in their professional capacity as medical officers; those who failed to apply for commission are liable for military service under the Selective Service Acts.

IV. Hospital Staff Members

Internes with more than twelve months of internship, assistant residents, fellows, residents, junior staff members, and staff members under the age of 45, fall within the provisions of the Selective Service Acts which provide that all men between the ages of 20 and 45 are liable for military service. All such men holding Army commissions are subject to call at any time and only temporary deferment is possible, upon approval of the application made by the institution to the Adjutant General of the United States Army certifying that the individual is temporarily indispensable. All such men holding Naval Reserve commissions are subject to call at any time at the discretion of the Secretary of the Navy. Temporary deferments may be granted only upon approval of applications made to the Surgeon General of the Navy.

All men in this category who do not hold commissions should enroll with the Procurement and Assignment Service. The Procurement and Assignment

Service under the Executive Order of the President is charged with the proper distribution of medical personnel for military, governmental, industrial and civil agencies of the entire country. All those so enrolled whose services have not been established as essential in their present capacities will be certified as available to the Army, Navy, governmental, industrial or civil agencies requiring their services for the duration of the war.

V. All Physicians Under Forty-five

All male physicians in this category are liable for military service and those who do not hold commissions are subject to induction under the Selective Service Acts. In order that their service may be utilized in a professional capacity as medical officers, they should be made available for service when needed. Wherever possible, their present positions in civil life should be filled or provisions made for filling their positions, by those who are (a) over 45, (b) physicians under 45 who are physically disqualified for military service, (c) women physicians, and (d) instructors and those engaged in research who do not possess an M.D. degree whose utilization would make available a physician for military service.

Every physician in this age group will be asked to enroll at an early date with the Procurement and Assignment Service. He will be certified for a position commensurate with his professional training and experience as requisitions are placed with the Procurement and Assignment Service by military, governmental, industrial or civil agencies requiring the assistance of those who must be dislocated for the duration of the national emergency.

VI. All Physicians Over Forty-five

All physicians over 45 will be asked to enroll with the Procurement and Assignment Service at an early date. Those who are essential in their present capacities will be retained and those who are available for assignment to military, governmental, industrial or civil agencies may be asked by the Procurement and Assignment Service to serve those agencies.

The maximal age for original appointment in the Army of the United States is 55. The maximal age for original appointment in the Naval Reserve is 50 years of age.

All inquiries concerning the Procurement and Assignment Service should be sent to the Executive Officer, 5654 Social Security Building, Fourth and Independence Avenues S. W., Washington, D. C., and not to individual members of the directing board or of committees thereof.

PERSONNEL OF SEVENTH CORPS AREA REVIEWING COMMITTEE

When Major Seeley spoke in Des Moines December 17, he stated that a committee representing the Seventh Corps Area would be appointed to act as final court of appeal on the names of doctors who should be exempt from military service. The

personnel of this committee was announced in the *Journal of the American Medical Association* in the issue of December 27, and is as follows:

Roy W. Fouts, M.D., Omaha, Chairman.
 F. L. Loveland, M.D., Topeka.
 Robert L. Parker, M.D., Des Moines.
 F. A. Pierson, D.D.S., Omaha.
 A. W. Bryan, D.D.S., Iowa City.
 H. D. Bergman, D.V.M., Ames.

TABULATION OF DOCTORS CALLED TO SERVICE

The members of the Iowa State Medical Society may be interested in a tabulation of doctors who have been called into service. This tabulation not only shows the number of physicians called from each county, but distinguishes between the exempt and non-exempt. It shows also how many new physicians located in the county during the year.

In considering the number of exempt physicians called, it should be kept in mind that most of these were medical reserve officers who had accepted a definite responsibility by assuming their commission. To their credit it may be said that most of them did not try to hide behind their classification of "exempt" but accepted the call when it came. For them, and for the other doctors who have left their practice to accept duty in the armed forces of the nation, we have the most profound respect and admiration. Relinquishment of their place in the community entails a very definite sacrifice on their part, a sacrifice we all must recognize and for which we should make some sort of recompense if possible.

Although the departure of these physicians has worked a hardship on the community in some instances, for the most part the medical societies and individual doctors have assumed the responsibility for giving medical care to those who need it, and your Medical Preparedness Committee does not believe, from the evidence it has, that there is any portion of the state which is being neglected medically. The Committee is grateful to the doctors who have shouldered heavier burdens, and be-

lieves their communities should accord to these physicians the same respect that is given to the men assuming military service.

County	Number of physicians called	Number of non-exempt physicians called	New physicians located in county
Adair	1	..	..
Allamakee	2	..	..
Audubon	1	1	1
Black Hawk	3	..	2
Boone	2	..	..
Bremer	1	..	..
Buchanan	2	..	..
Buena Vista	2	..	1
Butler	1	..	2
Calhoun	..	1	..
Carroll	2	..	1
Cass	1	..	..
Cedar	1	..	..
Cerro Gordo	2	..	2
Cherokee	1	..	..
Chickasaw	2	..	1
Clay	2	..	1
Dallas-Guthrie	1	..	2
Decatur	1	1	..
Delaware	1	..	2
Des Moines	4	..	..
Dickinson	1	..	2
Dubuque	4	..	1
Fayette	2	..	2
Greene	2	..	..
Hamilton	2	..	2
Hardin	1	..	..
Iowa	1	..	..
Jackson	1	..	2
Jasper	1	..	1
Jefferson	1	2	..
Johnson	..	..	..
Lee	15	..	..
Linn	2	..	..
Lucas	1	..	..
Lyon	2	..	2
Madison	1	1	..
Mahaska	..	1	2
Marion	2	..	1
Marshall	1	..	..
Mitchell	1	..	..
Monona	1	1	2
Montgomery	..	2	..
Muscatine	..	..	2
O'Brien	..	1	..
Oscoda	..	1	2
Page	1	2	11
Polk	1	..	20
Pottawattamie	..	6	5
Poweshiek	..	1	1
Sac	1	..	1
Scott	1	4	1
Sioux	..	2	..
Story	..	1	3
Tama	..	3	..
Wapello	1	1	1
Wayne	..	1	..
Webster	..	4	2
Winnesheik	1	1	2
Woodbury	..	9	..
Wright	..	1	..
Totals	12	149	65

MONTHLY PAY OF MEDICAL OFFICERS IN ARMY

Many physicians have inquired about compensation for doctors in military service, and the following table is given to provide that information.

Grade	Base Pay	Subsistence without dependents	Subsistence with dependents	Rental allowance without dependents	Rental allowance with dependents	Without dependents Total	With dependents Total
First Lieutenant.....	\$166.67	\$ 18.00	\$ 36.00	\$ 40.00	\$ 60.00	\$224.68	\$262.68
Captain.....	200.00	18.00	36.00	60.00	80.00	278.00	316.00
Major.....	250.00	18.00	54.00	60.00	100.00	328.00	404.00
Lieutenant Colonel.....	291.67	18.00	54.00	60.00	120.00	389.66	465.66
Colonel.....	333.33	18.00	36.00	80.00	120.00	431.34	489.34

Longevity Pay: Add five per cent to the figures shown in the first line of each group for each completed three years of active commissioned service (or equivalent thereto).

OBSTETRIC COURSES

In view of the present national defense program many physicians will be forced to carry heavier loads in those communities where some of their colleagues have entered government service. As a consequence some physicians with little or no obstetric training will be called upon to practice in this field. For this reason postgraduate courses in obstetrics will prove extremely valuable. The JOURNAL is happy to give publicity to the courses sponsored by the Illinois State Department of Health at the Chicago Lying-In Hospital.

Five postgraduate courses in obstetrics, each of four weeks' duration, will be offered at the Chicago Lying-Hospital between January 12 and June 6, 1942. These are sponsored by the Illinois State Department of Health and the Children's Bureau of the United States Department of Labor. The features of the program consist of observations on current management of normal and abnormal states of the pregnant, parturient, and puerperal patient. Lectures, demonstrations, clinics and other teaching means augment the operating room and birth room observations, and ward round discourses. The course is conducted on a non-profit basis. A deposit of \$25.00 is required on registration, \$10.00 of which is refunded at the completion of the course. All members of the department participate in giving the courses.

Additional information and application blanks may be obtained by request from Postgraduate Course, Department of Obstetrics and Gynecology, 5848 Drexel Avenue, Chicago, Illinois.

NATIONAL CONFERENCE ON MEDICAL SERVICE

Sixteenth Annual Meeting

Sunday, February 15, 1942

Palmer House Chicago, Illinois

9:00 a. m. Registration

9:30 a. m. The Relation of the Physician to Military, Civilian and Industrial Health
Procurement and Assignment of Physicians for Military Service

Sam F. Seeley, M.D., Executive Officer, Procurement and Assignment Service, Washington, D. C.

Civilian Defense: Civilian, Hospitals, Emergency Medical Squads

Graham L. Davis, Hospital Consultant, W. K. Kellogg Foundation, Battle Creek, Michigan

Industry's Problem in Maintaining Adequate Medical Care

Non-Defense Projects

John R. Nilsson, M. D., Chief Surgeon, Union Pacific Railroad, Omaha, Nebraska (Tentative)

National Defense Projects

W. D. Norwood, M.D., Medical Di-

rector, DuPont Company, Elwood, Ordnance Plant, Joliet, Illinois (Tentative)

11:30 a. m. The Rôle of the State Medical Society and State and City Departments of Health in National Defense.

State Medical Society

W. P. Wherry, M.D., President, Nebraska State Medical Society, Omaha, Nebraska

State Department of Health

W. L. Bierring, M.D., State Health Commissioner of Iowa, Des Moines, Iowa (Tentative)

City Department of Health

Herman N. Bundesen, M.D., President, Board of Health, Chicago, Illinois

12:15 p. m. Dinner

1:30 p. m. President's Address—Harold M. Camp, M.D., Monmouth, Illinois

1:45 p. m. Report of Nominating Committee; Annual Election of Officers; Selection of Place for 1943 Meeting

2:00 p. m. Rejected Selectees and Their Rehabilitation for Active Military Service

Local and Induction Board Examinations

Samuel J. Kopetzky, M.D., New York, N. Y. (Tentative)

One Million Rejected; What Per Cent May Be Salvaged: By Personal Physician or Dentist Prior to Induction

George Baehr, M. D., New York, N. Y. (Tentative)

J. R. Blayney, D.D.S., Chicago, Illinois

Following Induction

L. D. Redway, M.D., Ossining, New York (Tentative)

3:30 p.m. The Rôle of the Medical, Dental, Nursing Schools and Hospitals in Anticipating the Acceleration of Training

The Need for a Trained Personnel to Care for the Health of the Military

J. R. Darnall, M.D., Lieutenant Colonel, Medical Corps, Washington, D. C.

Status of Pre-Medic, Medic and Dental Students, Internes and Residents During the Emergency

Leonard Rowntree, M.D., Chief, Medical Division, Selective Service System, Washington, D. C.

What the Medical, Dental and Nursing Schools May Do to Hasten the Graduation of Their Respective Students.

Fred C. Zapffe, M.D., Chicago, Illinois (Tentative)

SPEAKERS BUREAU ACTIVITIES

POSTGRADUATE MEDICAL LECTURES

The postgraduate medical courses arranged thus far in 1942 are comprised of monthly or bimonthly lectures continuing throughout the year, with the exception of the summer months. It is found that lectures scheduled at such intervals offer a better opportunity for the physicians to attend each meeting. In view of existing conditions, the Speakers Bureau is not attempting at this time to schedule lectures for the entire year. Consequently, the Bureau page in each JOURNAL will carry a list of post-graduate medical lectures for that particular month, and it is hoped that all physicians will turn to this page and choose the meetings which will be of the most interest and value and reserve those dates on their calendars.

Another feature on this page each month will be the schedule of scientific recordings. This service has grown extensively in the past few months and it is anticipated that it will become of more and more value to the smaller county societies and medical groups during the year. The Bureau will appreciate receiving requests for the recordings two weeks or more in advance of the meeting date whenever pos-

sible. This will facilitate the arrangements and permit a wider choice of lectures. Two lectures are being added to our library of scientific transcriptions and will be available by the first of March; namely, The Macrocytic Anemias by Dr. William P. Murphy of Boston, Massachusetts, which will be accompanied by slides, and Chest Injuries by Dr. Jerome R. Head of Chicago, Illinois. Each of these recordings will range in length from thirty to forty-five minutes.

RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

Feb. 4-6 The Red Cross

Phil G. Watters, M.D.

Feb. 11-13 Health and Defense

Harry W. Dahl, M.D.

Feb. 18-20 The Common Cold

Herman J. Smith, M.D.

Feb. 25-27 The Hospital Laboratory

Julius S. Weingart, M.D.

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF FEBRUARY

Marshalltown Hotel Talcorn 6:30 p. m.	February 3	Clinical Diagnosis of Ovarian Pathology Walter Schiller, M.D., Chicago
Newton Skiff Memorial Hospital 6:30 p. m.	February 10	Common Diseases of the Skin and Their Treatment Wendell M. Willett, M.D., Des Moines
Carroll St. Anthony Hospital 6:30 p. m.	February 19	*Endocrinology as Applied to Pediatrics John A. Anderson, M.D., Minneapolis
Ames Sheldon-Munn Hotel 6:30 p. m.	February 26	Skin Grafting Earl C. Padgett, M.D., Kansas City
Toledo Knotty Pine Cafe 6:30 p. m.	February 26	Recent Developments in Obstetrics Addison W. Brown, M.D., Des Moines

(*) Tentative

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF FEBRUARY

Cedar Falls Sartori Hospital 6:30 p. m.	February 3	Care of the Premature Infant Julius H. Hess, M.D., Chicago
Atlantic Atlantic Hospital 6:00 p. m.	February 12	Head Infections in Relation to General Practice George E. Shambaugh, Jr., M.D., Chicago
Forest City Iowa Hotel 7:30 p. m.	February 17	Diseases of the Gallbladder R. Russell Best, M.D., Omaha
Humboldt 8:00 p. m.	February 20	Office Gynecology Joseph L. Baer, M.D., Chicago

WOMAN'S AUXILIARY NEWS

MRS. H. I. MCPHERRIN, *Chairman of Press and Publicity Committee*
5822 North Waterbury Road, Des Moines

President—MRS. W. R. HORNADAY, Des Moines

President Elect—MRS. F. W. MULSOW, Cedar Rapids

Secretary—MRS. M. J. MOES, Dubuque

Treasurer—MRS. A. E. MERKEL, Des Moines

ON THE HOME FRONT

The realization that I, a housewife and mother, am necessary to my country's defense is indeed a challenge. As director of defense in my own household I have many responsibilities because every member of my family has something to give to his country. To do this each must be physically fit, for it takes strong bodies and healthy minds to fill one's place in an emergency. A complete health examination for all members (including mother and father) would be a wise step. This might prevent long illnesses with the resultant loss of time from school, office and depleted income.

Nutrition is the homemaker's big problem, for upon this depends the health and happiness of her family. A diet is well-balanced when it contains protein foods which are used for body growth and repair, carbohydrates which provide energy and growth, and vitamins and minerals which protect the body and regulate its functions. The following well-known "Guide to Good Eating", prepared by the National Dairy Council and accepted by the Council on Foods of the American Medical Association, should be most helpful in the daily planning of meals. It is most important that we choose a variety of foods as well as those of contrast of flavor, texture, size and shape.

Milk—Two or more glasses daily for adults; three to four or more glasses daily for children, to drink and combined with other foods.

Vegetables—Two or more servings daily in addition to potatoes; one raw, green and yellow often.

Fruits—Two or more servings daily, one citrus fruit or tomato.

Eggs—Three to five a week; one daily preferred.

Meat, Cheese, Fish or Legumes—One or more servings daily.

Cereal or Bread—Most of it whole grain or "enriched".

Butter—Two or more tablespoons daily.

Every dollar I spend must go further than it has before; consequently, I must plan wisely before I spend it. Conservation of materials on hand is equally as important as the wise purchase of new ones. Whatever we buy for home use affects the building of national defense because it requires the use of machines in making, railroads or trucks for transporting and paper for wrapping. I must learn how, what and when to buy, and how to save and

repair. Clothing (especially woolens) should be carefully cleaned and repaired. Household appliances must be kept in good running order since new parts will not always be available. Any needless waste hinders our power to produce material which will ultimately win or lose this war.

As a mother I am also concerned with the morale of our second line of defense—our children. The stress and strain of war, homes broken with father or husband in the service, and in many cases, uncertain living conditions, are most trying to young America. However, they can "take it", and with our help they will come through ready to build a world of peace. Work in youth groups where they learn to be helpful to others, first aid training, sewing and knitting for the Red Cross, together with the proper amount of recreation, help occupy the leisure time. Love of church and love of country should be vital to them. The battle on the home front does not call for thrilling acts of daring; instead it demands the harder, more arduous task of constant vigilance and courage. We as housewives and mothers must be prepared to assume our responsibilities on this front; the battle must be won.

Mrs. W. R. Hornaday, President

SICKNESS INSURANCE

With the present emphasis on national defense and the necessity of using most of our efforts in winning the war, interest in sickness insurance has lagged to some extent. However, in several states, plans are in operation and much information is being gained which will be of value when the present emergency is over, and life returns to a more normal level.

There are many plans in operation throughout the country, varying from those in individual industries or towns, to those which are attempting to cover an entire state. The methods of conducting the plans, the provisions of the contracts, the conditions which are insured against, the method and amount of payment, and all the other various factors which enter into such a movement, vary widely. It would be impossible to attempt a discussion with any degree of completeness.

The fundamental idea behind all these movements is to allow individuals, primarily those in low-income groups, to prepare for the occurrence of illness by the regular payment of small amounts of money. The

chief fear of many of these people is not some minor illness, but a condition requiring surgical treatment or prolonged medical care, involving a relatively large expense for medical and nursing care and for hospitalization. The chief effort of the insurance plans is, therefore, to provide payment for these major illnesses, and leave the payment of small medical bills to the individual.

Several of the plans have two or three different contracts or policies, covering different groups of diseases, and provided at different costs. The most common, and the lowest in cost, is usually that which provides only a surgical benefit. The actual percentage of those who require surgery in any one year is very small; therefore, the cost of this spread over the group is low, often being one dollar per month or even less. This will provide for surgical fees up to several hundred dollars. Another type of contract covers surgical cases and illnesses which are being cared for in a hospital. This of course limits it to the more serious illnesses, and at the same time the most costly, and is usually about double the surgical policy cost. The third type covers all medical care, including surgery, illness in the home or hospital, and conditions which can be cared for as ambulatory cases in the doctors' offices. This type of contract is the most expensive, and is offered by the least number of the plans in operation.

Undoubtedly there is a great need for some method by which the lower income group can prepare, financially, for illness. However, in the actual development of the plans there have been many difficulties, and various methods have been used to avoid these. The general coverage contract is the one which must have the most protection, so that the privilege of having all medical services paid for in advance is not abused. This is often done by requiring that the patient pay the first five or ten dollars of any illness, or of the first illness in each policy year. This is analogous to the automobile collision policy with a fifty dollar deductible clause which requires the insured to pay the first fifty dollars for any repairs necessary after a collision. Such a provision reduces the cost of the policy in both automobile and sickness insurance by a surprising amount, and yet covers the individual when it comes to any large loss or expensive illness.

As these plans have developed in the United States the medical profession has naturally been intensely interested in them. Various individuals and groups have studied the various sickness insurance schemes in operation in the countries of Europe. They have found many defects in these systems, and in their insistence that these be avoided they have been accused of being entirely antagonistic to the idea of any type of sickness insurance. This is being disproved by the fact that a great majority of the schemes now in operation and in the course of development are being carried on under the auspices of the state and county medical societies. California, Michigan and New Jersey are conducting medical care plans which cover large sections of these states.

A few years ago the State Medical Society of Wisconsin financed three different plans, in three counties in that state, in an effort to find the pattern which would best suit their needs.

The development of hospital insurance has been very rapid over the country and in many states medical care plans have been integrated with the hospital care plans to simplify control and to reduce the overhead cost. In almost all cases the plans have been developed in the thickly populated and highly industrialized areas of the country. Hospital insurance plans, even in states like Iowa and Missouri, have almost all of their subscribers or members in the cities. Hospital Service, Incorporated, of Iowa, covers over 30,000 people, yet the members in truly rural districts are only a very small percentage of the total. A medical care plan, to be effective in Iowa, would have to be so developed that it could be made available to that large percentage of our population which lives in the small towns and in the country. Studies are being carried out in several states, to devise ways through which hospital insurance can be advantageously and economically made available to the rural population. Coincident with this work, studies are also being made on the advisability of developing medical prepayment plans which could cover the same group.

Much work must be done, and many experiments must be made, before a satisfactory plan can be developed. The important thing is to go slowly, and to build plans carefully, so that in the end, any plan put into operation will provide a reasonable protection against the cost of serious illness, will still tend to develop the best possible type of medical care, and will be conducted with the least possible overhead cost.

Mrs. E. E. Shaw

WHO'S WHO IN THE FIELD OF NUTRITION

Since our program this year deals with "Women in Defense", we thought it would be appropriate to list the people in the field of nutrition who are particularly instrumental in carrying out the idea of "Food in Defense". There are many men and women in this field who are contributing to this project, too many to include here; therefore, this time we shall list only some of the people in Iowa.

1. P. Mable Nelson, Ph.D., from Yale University, now head of the foods and nutrition department, Iowa State College, Ames. Chairman of Committee for "Food in Defense" in Iowa.

2. Kate Daum, Ph.D., director of nutrition, State University Hospitals, Iowa City. Secretary of Committee for "Food in Defense" in Iowa.

3. Genevieve Stearns, Ph.D., research associate professor in pediatrics. Work includes problems in vitamins and mineral metabolism.

4. Elizabeth Sutherland, Ph.D., head of home economics department, Iowa State Teachers College, Cedar Falls.

5. Pearl Swanson, Ph.D., from Yale University, now professor in foods and nutrition department, Iowa State College, Ames. Made studies of vitamin metabolism; rôle of meats in nutrition, etc.

6. Margaret Ohlson, Ph.D., from State University of Iowa, now associate professor in foods and nutrition department, Iowa State College, Ames. Work in iron and copper metabolism and nutritional status of college women.

7. Evelyn Holland, M.S., from Pennsylvania State Nutritionist, Iowa State Department of Health, Des Moines, formerly in extension department at Iowa State College, Ames.

Mrs. L. E. Rosebrook

THE AUXILIARY QUIZ

How are you, a doctor's wife, prepared to serve your country in this time of emergency?

Are you a good nutritionist?

Can you give first aid?

Are you keeping yourself and your family physically fit?

Are you doing any Red Cross work?

Our men are in training for service; are we prepared to serve?

Calhoun County

Mrs. Robert H. McBride of Sioux City, spoke for members of the Woman's Auxiliary to the Calhoun County Medical Society, Tuesday, October 21, on activities of the auxiliary in Sioux City. The meeting was held at the home of Dr. A. V. Grinley in Rockwell City.

The Auxiliary was entertained again at the home of Dr. Grinley on Tuesday, November 18, at which time all the members present worked on a Red Cross layette.

Mrs. A. V. Grinley, Secretary

Worth County

The Woman's Auxiliary to the Worth County Medical Society served dinner for physicians of Worth County and their wives at the home of Dr. and Mrs. C. A. Hurd in Northwood, on October 20. The dinner was in honor of Dr. Hurd, who has been an active practicing physician in Northwood for fifty-three years. He was presented with a certificate to the Fifty Year Club, recently organized by the Iowa State Medical Society.

Mrs. S. S. Westly, Secretary

BOOK NOTES

"When pestilence falls on the people there is a story to tell. The story of the people who do not fall sick has never been told. Perhaps it is the most important part of epidemiology." On this thesis Mr. Geddes Smith proceeds to write a very fine book entitled *Plague On Us* in which he tells many stories from medical history with emphasis on those con-

cerned with epidemics. From the time when superstition and the trial and error method ruled in medicine to the present in which there is much left to be done in epidemiology we have the story of epidemics. The sick individual is at the bottom of epidemics. Curing or killing the offender, isolation and building up resistance are discussed in detail. Mr. Smith's terminology is clever. In his chapter on "Detective Work" he recounts The Case of the Ladylike Oysters, The Case of the Sleepy Lobsters, and Plumber's Patchwork, the latter being an account of the amebic dysentery epidemic which occurred in Chicago during the 1933 Fair. There is no time quite so conducive to epidemics as wartime; hence, we recommend this book as particularly timely and valuable as well as pleasurable and informational reading.

Countless books have been written on the subject of child adoption, but usually from the parent and not the child angle. In *An Adopted Child Looks at Adoption* by Carol S. Prentice, we find a new and sometimes startling viewpoint. The author was an adopted child herself with memories of her own mother and two foster mothers. She grew up in an adoption home, and as an adult became a lawyer whose chief interests lay in adoption legislation and practices. Autobiographical material is present in large degree in the book and adds greatly to its interest and value. With two children of her own, Mrs. Prentice adopted another child in order to understand the problem more fully. Her book is short and her opinions are not dogmatic as she discusses the fairy tale approach, fits and misfits, heredity and environment, spinsters as parents, babies for sale, and the right home for the right child. This volume is the ideal book to put in the hands of would-be parents by adoption or those who are already parents of adopted children.

A new book by L. E. Bisch, M.D., *Why Be Shy?* is an excellent answer to the need for confidence and poise which many individuals lack. Dr. Bisch is a practicing psychiatrist and writes with the authority of experience.

Women in Crime by Florence Monahan is the autobiography of a famous woman penologist who advocates medical care and recreational work for the rehabilitation of women prisoners. Her conclusions have been the result of twenty years work in this field.

Mrs. K. M. Chapler

SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

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Feb. 4-6 The Red Cross

Phil G. Watters, M.D.

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Harry W. Dahl, M.D.

Feb. 18-20 The Common Cold

Herman J. Smith, M.D.

Feb. 25-27 The Hospital Laboratory

Julius S. Weingart, M.D.

SOCIETY PROCEEDINGS

Adair County

Newly elected officers of the Adair County Medical Society include: Dr. Dale D. Cornell of Greenfield, president; Dr. A. Jay Gantz of Greenfield, secretary and treasurer; Dr. Lewis H. Ahrens of Fontanelle, delegate; and Dr. Earl O. Reynolds of Greenfield, alternate delegate.

Adams County

Dr. Frederick Binder of Corning was named president of the Adams County Medical Society for 1942 at a recent meeting of the group. Other officers are: Dr. William F. Amdor of Carbon, vice president; Dr. Jay H. Wallahan of Corning, secretary and treasurer; Dr. Clarence L. Bain of Corning, delegate; and Dr. Binder, alternate delegate.

Allamakee County

The Allamakee County Medical Society recently elected the following officers to head the society during 1942: Dr. Floyd W. Ernst of New Albin, president; Dr. John W. Thornton of Lansing, secretary and treasurer; Dr. Roy R. Jeffries of Waukon, delegate; and Dr. Thornton, alternate delegate.

Appanoose County

Newly elected officers of the Appanoose County Medical Society include: Dr. Bernard B. Parker, president; Dr. Frederick C. Lowry, secretary and treasurer; Dr. James C. Donahue, delegate; and Dr. Charles S. Hickman, alternate delegate. All officers are of Centerville.

Audubon County

Dr. Peder Soe of Kimballton was named president of the Audubon County Medical Society for 1942 at a recent meeting of the group. Other officers are: Dr. Peder J. Bursheim of Exira, vice president; Dr. Donald W. Todd of Audubon, secretary and treasurer; Dr. Peter E. James of Elkhorn, delegate; and Dr. LeRoy E. Jensen of Audubon, alternate delegate.

Benton County

The Benton County Medical Society recently elected the following officers for the ensuing year: Dr. Nathan B. Williams of Belle Plaine, president; Dr. George W. Yavorsky of Belle Plaine, vice president; Dr. Dean A. Dutton of Van Horne, secretary and treasurer; Dr. George R. Woodhouse of Vinton, delegate; and Dr. Earl D. Lovett of Vinton, alternate delegate.

Boone County

Officers of the Boone County Medical Society, selected at the recent annual meeting of that organiza-

tion are: Dr. Albert B. Deering of Boone, president; Dr. Orson W. Clark of Ogden, vice president; Dr. Ben T. Whitaker of Boone, secretary and treasurer; Dr. Deering, delegate; and Dr. Robert S. Shane of Pilot Mound, alternate delegate.

Bremer County

Newly elected officers of the Bremer County Medical Society are: Dr. Herbert W. Rathe of Waverly, president; Dr. Robert E. Robinson of Waverly, vice president; Dr. Otto S. Blum of Waverly, secretary and treasurer; Dr. Leon D. Jay of Waverly, delegate; and Dr. James E. Whitmire of Sumner, alternate delegate.

Buena Vista County

Dr. Russell R. Hanson of Storm Lake was elected president of the Buena Vista County Medical Society for 1942 at a recent meeting of the society. Other officers include: Dr. Thomas R. Campbell of Sioux Rapids, secretary and treasurer; Dr. Max A. Armstrong of Newell, delegate; and Dr. Harold E. Farnsworth of Storm Lake, alternate delegate.

Cerro Gordo County

The Cerro Gordo County Medical Society recently elected the following officers to head the organization during 1942: Dr. Roger R. Flickinger, president; Dr. Harold W. Morgan, vice president; Dr. Carroll O. Adams, secretary; Dr. Chetwynd M. Franchere, treasurer; Dr. Howard D. Fallows, delegate; and Dr. George M. Crabb, alternate delegate. All officers are of Mason City.

Robert L. Jackson, M.D., of the department of pediatrics, State University of Iowa, College of Medicine, Iowa City, was guest speaker for the Cerro Gordo County Medical Society, Tuesday, January 13, at the meeting held in Mason City. Guido J. Sartor, M.D., of Mason City, also appeared on the program which was devoted to a discussion of pediatrics.

C. O. Adams, M.D., Secretary

Chickasaw County

The Chickasaw County Medical Society met in New Hampton, Friday, December 19, and elected officers as follows for the ensuing year: Dr. Nicholas Schilling of New Hampton, president; Dr. John McDannell of Nashua, vice president; Dr. Eva Haumeder of New Hampton, secretary and treasurer; Dr. Paul E. Gardner of New Hampton, delegate; and Dr. Hans Haumeder of New Hampton, alternate delegate. Dr. Joseph M. Kerwick of New Hampton was named chairman of the county committee on medical preparedness, to replace Dr. Paul C. Richmond who is in active duty at Fort Leonard Wood, Missouri.

Eva Haumeder, M.D., Secretary

Clarke County

Newly elected officers of the Clarke County Medical Society for 1942 are: Dr. George I. Armitage of Murray, president; Dr. Frederick S. Bowen of Woodburn, vice president; Dr. Kenneth R. Brown of Osceola, secretary and treasurer; Dr. Con R. Harken of Osceola, delegate; and Dr. Armitage, alternate delegate.

Clinton County

Dr. Ralph F. Luse was elected president of the Clinton County Medical Society at a recent meeting held by the society. Other officers are: Dr. Robert E. Dwyer, vice president; Dr. Viola D. Nelken, secretary and treasurer; Dr. Robert J. Nelson, delegate; and Dr. Charles V. Waggoner, alternate delegate. All officers are of Clinton.

Crawford County

The Crawford County Medical Society recently elected the following officers to head the society during 1942: Dr. Edward B. Zaeske of Charter Oak, president; Dr. Dora E. Zaeske of Charter Oak, secretary and treasurer; Dr. Charles H. Fee of Denison, delegate; and Dr. Max F. Wetrich of Manilla, alternate delegate.

Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie Medical Society was held at the Rotary Club Rooms in Adel, Thursday, January 15, with dinner at 12:15 p. m. The program was as follows: Errors in Diagnosis, Charles A. Nicoll, M.D., Panora; Management in Heart Failure, Harold C. Bone, M.D., Des Moines; and Functional Diseases of the Colon, Clement A. Sones, M.D., Des Moines.

S. J. Brown, M.D., Secretary

Davis County

Newly elected officers of the Davis County Medical Society include: Dr. George W. Gilfillan of Bloomfield, president; Dr. Elmer R. Newland of Drakesville, vice president; Dr. Henry C. Young of Bloomfield, secretary and treasurer; Dr. George L. Prentice of Troy, delegate; and Dr. Charles D. Fenton of Bloomfield, alternate delegate.

Decatur County

Dr. John W. Wailes of Davis City was named president of the Decatur County Medical Society at a recent meeting of the group. Other officers are: Dr. William N. Doss of Leon, vice president; Dr. Marion W. Rogers of Leon, secretary and treasurer; Dr. Guy P. Reed of Davis City, delegate; and Dr. Elmo E. Gamet of Lamoni, alternate delegate.

Delaware County

New officers of the Delaware County Medical Society, elected recently, are: Dr. Richardson E. Clark of Manchester, president; and Dr. Oscar Baumgarten of Earlville, secretary and treasurer.

Hardin County

The Hardin County Medical Society met at the Princess Cafe in Iowa Falls, Friday, January 16. A colored motion picture film on the Treatment of Pneumonia was shown, with a discussion by F. E. Schmidt, M.D., of Chicago.

W. E. Marsh, M.D., Secretary

Henry County

The annual election of the Henry County Medical Society was held at the Brazelton Hotel in Mt. Pleasant, Friday, December 19, with the following results: Dr. Walter A. Sternberg, president; Dr. James S. Jackson, vice president; and Dr. Samuel W. Huston, secretary and treasurer. All officers are of Mt. Pleasant.

Jackson County

Officers elected for the Jackson County Medical Society, at a meeting held in Maquoketa, Thursday, December 11, are as follows: Dr. John W. Jordan of Maquoketa, president; Dr. Elmer L. Lampe of Bellevue, vice president; and Dr. John J. Tilton of Maquoketa, secretary and treasurer.

Jefferson County

Dr. Roy G. Swinney of Richland was elected president of the Jefferson County Medical Society at the annual meeting held Wednesday, December 17, at the Leggett Hotel in Fairfield. Other officers are: Dr. Roy A. McGuire of Fairfield, vice president; Dr. Ira N. Crow of Fairfield, secretary; Dr. F. Haven McClurg of Fairfield, treasurer; and Dr. James S. Gaumer of Fairfield, delegate.

Johnson County

The January meeting of the Johnson County Medical Society was held at the Hotel Jefferson in Iowa City, Wednesday, January 7. The meeting was attended by 135 members and four guests. The scientific program consisted of a Symposium on Sulfonamide Therapy, with papers presented by the following men: Horace M. Korns, M.D., Willis M. Fowler, M.D., William H. Hale, M.D., Rubin H. Flocks, M.D., Philip C. Jeans, M.D., Dean M. Lierle, M.D., Ruben Nomland, M.D., and Frank R. Peterson, M.D., all of Iowa City.

A. L. Sahs, M.D., Secretary

Kossuth County

The annual election of officers for the Kossuth County Medical Society, held Friday, January 2 at the Kossuth County Hospital in Algona, resulted as follows: Dr. Melvin G. Bourne, president; Dr. Robert M. Wallace, vice president; and Dr. John N. Kenefick, secretary and treasurer. All officers are of Algona.

Linn County

The next meeting of the Linn County Medical Society will be held in Cedar Rapids, Thursday, Feb-

ruary 12, with Dean M. Lierle, M.D., professor of otolaryngology, State University of Iowa, College of Medicine, Iowa City, as guest speaker. All members of the Iowa State Medical Society in surrounding counties are cordially invited to attend.

R. J. Stephen, M.D., Secretary

Madison County

The Madison County Medical Society met at the Winterset Community Hospital, Monday, January 19, for a six-thirty dinner and regular meeting. Harry W. Dahl, M.D., of Des Moines, presented an interesting series of x-ray films.

Evelyn M. Olson, M.D., Secretary

Page County

New officers of the Page County Medical Society, elected at the annual meeting held Friday, December 26 in Shenandoah, are: Dr. Erwin J. Gottsch, of Shenandoah, president; Dr. J. Frank Aldrich of Shenandoah, vice president; Dr. Norman M. Johnson of Clarinda, secretary and treasurer; Dr. Robert J. Matthews of Clarinda, delegate; and Dr. Aldrich, alternate delegate.

Polk County

The next meeting of the Des Moines Academy of Medicine and Polk County Medical Society will be held at Younkers Tea Room, Wednesday, February 18. Frank C. Mann, M.D., professor of pathology and experimental physiology and surgery at the University of Minnesota Postgraduate Medical School, will speak on The Physiology of the Liver. Albert M. Snell, M.D., associate professor of medicine at the University of Minnesota Postgraduate Medical School, will give a paper on Recent Advances in the Study of Cholecytic and Hepatic Diseases.

Pottawattamie County

Dr. Eugene B. Floersch of Council Bluffs was elected president of the Pottawattamie County Medical Society at a meeting held in Council Bluffs Saturday, December 20. Other officers include Dr. Kenneth L. Thompson of Oakland, vice president; and Dr. Gerald V. Caughlan of Council Bluffs, secretary and treasurer.

Scott County

The Scott County Medical Society entertained Roger Kennedy, M.D., associate professor of pediatrics at the University of Minnesota, Mayo Foundation, as its guest speaker, Tuesday, January 6. Dr. Kennedy spoke on Blood in the Stools of Infants and Children.

The next meeting of the group will be Tuesday, February 3, at the Lend-a-Hand Club in Davenport,

when Herbert Rattner, M.D., dermatologist of Chicago, will be the speaker.

J. H. Sunderbruch, M.D., Secretary

Sioux County

Officers for the Sioux County Medical Society, named at a meeting held in Sioux Center, Thursday, December 18, are: Dr. Thomas J. Glasscock of Hawarden, president; Dr. Cornelius B. Murphy of Alton, vice president; and Dr. Edward B. Grossmann of Orange City, secretary and treasurer.

Tama County

Charles K. McCarthy, M.D., of the Iowa State Department of Health, Des Moines, furnished the program for members of the Tama County Medical Society, Monday, December 29, at a meeting held in Tama. He explained the new case-finding tuberculosis program which has been designed for smaller counties in the state. Officers elected at the annual meeting include: Dr. Aloysius J. Havlik of Tama, president; Dr. Edson C. Knight of Garwin, vice president; Dr. Joseph M. Standefer of Tama, secretary and treasurer; and Dr. Ira D. Nelson of Toledo, delegate.

Union County

Physicians from Union, Taylor, Adams, Ringgold and Clarke counties attended the meeting of the Union County Medical Society held in Creston, Tuesday, January 13. F. E. Schmidt, M.D., of Chicago, and Carl F. Jordan, M.D., of the State Department of Health, Des Moines, spoke before the group, and a new colored motion picture on The Treatment of Pneumonia was shown. Officers elected for 1942 are as follows: Dr. Cyrus C. Rambo of Creston, president; Dr. John A. Liken of Creston, vice president; Dr. Carl E. Sampson of Creston, secretary and treasurer; Dr. A. Fred Watts of Creston, delegate; and Dr. Howard G. Beatty of Creston, alternate delegate.

C. E. Sampson, M.D., Secretary

Van Buren County

Dr. Roscoe Pollock of Douds was named president of the Van Buren County Medical Society at a meeting held in Keosauqua, Tuesday, December 30. Other officers are: Dr. James A. Craig of Keosauqua, vice president; Dr. Elmer E. Sherman of Keosauqua, secretary and treasurer; Dr. Lonnie A. Coffin of Farmington, delegate; and Dr. Homer J. Gilfillan of Cantril, alternate delegate.

Wapello County

Murdoch Bannister, M.D., of Ottumwa, spoke before members of the Wapello County Medical Society, Tuesday, January 6, at the meeting held at St. Joseph

Hospital in Ottumwa. Dr. Bannister discussed The Kenny Management of Poliomyelitis.

University of Iowa, College of Medicine, Iowa City, and completed his internship at St. Mary's Hospital in Grand Rapids, Michigan.

Warren County

The Warren County Medical Society met Wednesday, January 21, at Burkey's Cafe in Indianola, for a six-thirty dinner and meeting. Election of officers resulted as follows: Dr. Emil A. Fullgrabe of Indianola, president; Dr. George A. Jardine of New Virginia, vice president; Dr. Ernest E. Shaw of Indianola, secretary and treasurer; Dr. Clare A. Trueblood of Indianola, delegate; and Dr. Shaw, alternate delegate. At the business session the secretary was instructed to use the surplus in the Society treasury to purchase \$25.00 defense bonds for each member. The group also voted to conduct standard Red Cross first aid courses in the county, with the doctors acting as instructors.

E. E. Shaw, M.D., Secretary

Webster County

Dr. Edgar N. Zinn was elected president of the Webster County Medical Society at a meeting held Tuesday, December 23, in Fort Dodge. Other officers are Dr. Richard C. Sebern and Dr. Loran M. Martin, vice presidents; and Dr. Paul C. Otto, secretary and treasurer. All officers are of Fort Dodge.

Woodbury County

The rôle of the physician in the national defense effort was discussed for members of the Woodbury County Medical Society by Dr. Edward H. Sibley, county chairman of the medical preparedness committee, at a meeting held Tuesday, December 30, at the Martin Hotel in Sioux City. Election of officers at the business session resulted as follows: Dr. Earl E. Morgan, president elect; Dr. Warren Z. Earl, president; Dr. William H. Gibbon, vice president; and Dr. Wayland K. Hicks, secretary and treasurer. All officers are of Sioux City.

W. K. Hicks, M.D., Secretary

PERSONAL MENTION

Dr. Edward T. Carey, Jr., has become associated with Dr. William P. Hofmann of Davenport, in the latter's specialty of eye, ear, nose and throat diseases. Dr. Carey was graduated in 1937 from the State University of Iowa, College of Medicine, Iowa City, and served his internship at the Lawrence Memorial Hospital in New London, Connecticut. For the past three years he has been engaged in special work at the Cornell University Medical Center in New York.

Dr. Arthur F. Grandinetti has located in Oelwein in the offices formerly occupied by Dr. Howard Risk. Dr. Grandinetti was graduated in 1940 from the State

Dr. James G. Macrae of Creston presented an illustrated talk on "Blood Pressure" for members of the Creston Rotary Club, Monday, December 29.

Dr. Clyde M. Longstreth, formerly of New York, has opened offices in Atlantic. Dr. Longstreth was graduated in 1926 from the State University of Iowa, College of Medicine, Iowa City, and served for six years as flight surgeon in the United States Marine Corps. For the past ten years he has been practicing in New York.

Dr. Enoch G. Kettelkamp of Monona spoke before the Monona Woman's Club Tuesday, January 6, on "The Uses of the X-Ray."

Dr. Eugene C. Penn, who recently completed his internship at Iowa Methodist Hospital in Des Moines, has become associated with Dr. Fred Sternagel in West Des Moines. Dr. Penn was graduated in 1941 from Loyola University School of Medicine, Chicago.

MARRIAGES

Miss Rose Tomlin of Waterloo, and Dr. Arthur F. Grandinetti of Davenport were married Monday, December 29, in Waterloo. Dr. Grandinetti was graduated in 1940 from the State University of Iowa, College of Medicine, Iowa City, and completed his internship at St. Mary's Hospital in Grand Rapids, Michigan. Dr. and Mrs. Grandinetti will live in Oelwein, where he has just entered the practice of medicine.

The marriage of Miss Nona Jane Moore of Dunlap and Dr. Clement W. Byrnes, formerly of Dunlap, took place Tuesday, December 23 at St. John's Methodist Church in St. Louis. Dr. Byrnes practiced in Dunlap for five years, and at present is a member of the Air Corps Medical Staff at Jefferson Barracks, Missouri.

DEATH NOTICES

Davies, James Eugene, of Oxford Junction, aged sixty-eight, died December 26 after an extended illness. He had had a cerebral hemorrhage in May, 1941. He was graduated in 1898 from St. Louis College of Physicians and Surgeons, and had long been a member of the Jones County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. TOM B. THROCKMORTON, Des Moines

DR. JOHN T. McCLINTOCK, Iowa City

DR. WALTER L. BIERRING, Des Moines

DR. R. T. LENAGHAN, Clinton

DR. HENRY G. LANGWORTHY, Dubuque

Medical History of Webster County

By WILLIAM W. BOWEN, M.D.,
Fort Dodge, Iowa

IOWA LANDS

Iowa before the advent of the white man was a beautiful untamed space between the Mississippi and Missouri rivers. It was essentially a prairie country, with many rivers and creeks running through it. There are many notions as to why it was not wooded as were most of Illinois, Indiana and Ohio, but there is no satisfactory answer. It is easy to understand that after the prairie was established it was kept that way by fires which destroyed all the little trees as fast as they grew leaving only those on the wet ground along the rivers. So it followed that there were wooded strips along the rivers. Outside these narrow strips were miles and miles of prairie without a tree for hundreds of miles, but it was never a desert. The land was not level but covered with ridges and hills, grasses and flowers. Between the ridges were ponds and sloughs, and occasionally there were almost flat areas which generally contained a lake or many lakes connected by low swampy marshes, filled with water fowl, cranes, bittern or shitepokes, as they were more often called, ducks, geese, brants and mud hens, literally by millions. The prairies were filled with coyotes, foxes, an occasional antelope and a few buffalo. However, buffalo were migrants here. The grass was always killed by the first heavy frost and thereafter would not sustain any animal life so the buffalo were here only in summer, going to the south and southwest every winter.

In the spring and summer, and especially in the autumn this region was perfectly lovely. First in the spring the crocuses appeared, their delicate purple flowers studding the landscape, and the prairie chickens were evident in great numbers, crowing and having their dances and battles with each other just before the mating season. The grass appeared next and grew steadily until it

was a foot high, interspersed with wild flowers of every color. Later in the summer the fall and summer plants bloomed, the rosin weed on a long stem with yellow flowers, always pointing north and south so it was also called the compass weed. Daisies and golden rod and other flowers of every hue made the prairie a mass of color. In winter the whole country was bleak and covered with snow. On sunny days sun dogs gave a cold and inhospitable look to the whole country, the verdure was gone, the winds had a clear sweep, all animals were gone except now and then a wolf or a crow flying over the white desert, and it was quite uninhabitable to man. Perhaps a flock of prairie chickens could be seen flying across it for they gathered into very large flocks and lived mostly in the timber along the rivers in winter, but the timber animals were there and the hunting was good.

The human inhabitants were a few roving bands of Indians who lived along the rivers in teepees made of skins. The Indians here, unlike the Indians in Ontario and Quebec and around the great lakes, who made fairly permanent dwellings of logs and were fairly comfortable, never made any houses, and they moved about where the hunting was good. They were in small bands and only collected together for the great hunts or for war. They clad themselves in skins, and engaged in no agriculture and no industries except hunting. Fishing also was good. The streams and lakes teemed with fish, some of which were enormous. The Indians often took catfish from the Mississippi River weighing over 200 pounds which were fifteen inches across their heads. There never were more than a few hundred Indians at one time in Iowa and these were scattered about in from one teepee to a dozen, miles apart, with none on the prairies.

One hundred years before our Revolutionary

War, two Frenchmen, Louis Jolliet and Father Marquette came floating down the Wisconsin River, the first white men ever to lay eyes on this beautiful, fertile, flower bedecked land. There it lay just as time and rains and sun and winds and snow had left it since the last glacial period which was not less than 150,000 years. They came down the Wisconsin River and happened to strike the only portion of Iowa which was never glaciated or at most never had more than one glacier, and that one of the earliest of the five glaciers which have covered parts or all of the rest of Iowa. For some unknown reason there was an area from LaCrosse, Wisconsin, to Galena, Illinois, including McGregor, Iowa, that never was covered with ice.

Jolliet and Marquette floated down the Mississippi as far as the mouth of the Des Moines River. This exploration gave the French the right to all of Iowa lands, and thus Iowa lands have been under three flags. The territory was under the Spanish flag when the French ceded it to Spain to keep it from falling into the hands of the English at the time of the French and Indian War. Spain returned it to France after a few years, and Thomas Jefferson bought it of Napoleon in 1803, since which time it has been under the American flag.

For a number of years Iowa country was included in various territories. At first all the territory north of the state of Louisiana was a part of the territory of Indiana, but in less than a year the country west of the river was named the territory of Louisiana and the capitol was at St. Louis. When Louisiana was made a state in 1812 the name was changed to the territory of Missouri but the capitol was still at St. Louis, and so it remained until 1812 when Missouri became a state. After that the whole territory north of Missouri had no government for thirteen years, there being so few inhabitants that it was not necessary. In 1834 it was made a part of the territory of Michigan and the capitol was at Detroit. Two years later Michigan became a state and Iowa was made a part of the territory of Wisconsin. The capitol at first was at Belmont on the east side of the Mississippi but later was located at Burlington. In July 1838 the territory of Iowa was formed after a very stormy time in Congress. This territory included all of the state of Minnesota and part of Nebraska and parts of North and South Dakota; the capitol was located at Iowa City. Iowa became a state in 1846 after a stormy fight in congress and after being voted down by the people in Iowa twice.

For about one hundred years after the visit of Marquette and Jolliet no white men came to Iowa lands except Father Hennepin who traveled the

same route down the Wisconsin River, but he turned north instead of south. He was captured by Sioux Indians somewhere in Minnesota and held as a prisoner for over two years when he was rescued by some other Frenchmen. He drew a fairly workable map of the northwest territory and the Great Lakes region. There may have been a few trappers, hunters and Catholic missionaries, but if so they left no record of their doings until Jean Marie Cardinal came about the time of the opening of the Revolutionary War, with his Indian wife and their half breed family, and settled at the mouth of Catfish Creek near Dubuque. He was a trader and opened the old Indian lead mines there about 1776. Four years later the British captured a few Americans and took over the mines although the mines were indubitably Spanish. About five years after the Revolutionary War, Julien Dubuque, a Frenchman, came to the lead mines and ingratiated himself so well with the Indians that they allowed him to reopen the lead mines. He worked them several years and received a grant to work them from the Spanish governor at St. Louis. His grant covered all that is now the city of Dubuque as well as most of the county and part of Jackson county. Two other Spanish grants were made, both to Frenchmen. One was given to Basil Giard, where McGregor now is; the other, located at the upper end of the Des Moines rapids where Montrose now is, was given to Louis Honore Tessen.

For thirty years after the Louisiana Purchase settlers were not allowed west of the Mississippi River; all the land belonged to the Indians, the Sacs and Foxes east of the Des Moines River and the Sioux to the north. The various Indian tribes carried on intermittent warfare for some time. The last battle between the Indians occurred west of what is now Fort Dodge on the south fork of the Lizard about four miles from the river. The Black Hawk War occurred in Illinois in 1830 at the close of which the government took from the Indians a strip of land west of the Mississippi River fifty miles wide from the neutral ground to the southern part of the state except for a small tract held by Keokuk, which the Sac Indians were allowed to keep because Keokuk did not take part in the Black Hawk War.

After that settlers came into Iowa lands rapidly. Settlers in those early times followed the rivers, and they settled along the rivers too. The judgment of the early settlers has always been questioned for settling along the rivers and thus getting the roughest and what afterward proved the poorest land. However, they did the best for themselves at the time. They had to have

wood which grew along the rivers and there alone, and they had to have water from the creeks and springs along the rivers. Furthermore it was quite impossible to live on the prairies because of fires and the rigors of weather in the winter.

In 1849 a surveyor was running the correction line across the state about one and one-half miles south of Fort Dodge when he was approached by Sidominodota and told that he was surveying Indian land and to get off. He did not obey but went on with his work. Sidominodota soon returned and attacked the surveyors, broke their instruments and destroyed their corner posts. Sidominodota was sort of an outlaw among the Indians and the nominal head of a band of about 500 similar characters, outlaws among Indians and whites alike. In 1850 the Fort was started where Fort Dodge now stands. The site was selected because of threatened trouble with the Indians especially the Sioux, the trouble with the surveyor and the trouble with the Lott family, which will be discussed later. The site was within the neutral grounds near its southwest corner and was the second fort within that territory, the first being Fort Atkinson in Winneshiek County which had been abandoned. The one at the mouth of the Raccoon River, now Des Moines, had also been abandoned. There were no settlers this far north at that time. The soldiers came from Fort Snelling. The Fort was located on the north side of what is now First Avenue North, beginning between Sixth and Seventh Streets and running westward about four blocks to the brow of the hill. There were in all twenty-one buildings including the settler's store, commandant's headquarters, officers quarters, barracks, laundry, homes for married men and even a theater where home talent plays and dances were given. The stables were north of the other buildings and the parade ground was where the city square now is. There was no stockade or blockhouse.

In 1846, four years before the soldiers came, an incident relating to Lott's wife occurred. Lott was a New Englander, of very unsavory repute, a whisky seller and horse thief. He sold whisky to the Indians, but in this particular he was no worse than the American Fur Company with John Jacob Astor at its head. Lott appeared in Iowa first in 1845 at Red Rock in Marion County, and at once began the selling of whisky and stealing horses. After a few months he was advised by the settlers to move on, which he did. He went first to Peas Point south of Boone, but stayed only a short while and moved to the mouth of Boone River, where he built a cabin and began his usual whisky selling and horse

stealing. The Indians traced five of their ponies to him. The Indians of that region were already in a state of unrest and Sidominodota led a small party to Lott's cabin where they accused him of stealing the ponies and ordered him to leave. He refused and they began killing his horses and other livestock. Lott escaped across the river and left his family to whatever fate might befall them. The Indians then mistreated Mrs. Lott and the children, but Mrs. Lott got away and hid in the bushes, while the Indians took all the feed in the cabin and scared the children away. One of the boys started down the river to give the alarm, and was found a few days later near Boone frozen to death. Mrs. Lott also died a few days later. Several years later Lott passed through Fort Dodge and established himself at the mouth of Lot's Creek in Humboldt County. He built himself a cabin and with his stepson began selling whisky. Later, in 1857, Lott and his stepson succeeded in killing Sidominodota and most of his family. As a result of this massacre Lott had to leave the country. His stepson received word in Fort Dodge a few years later that Lott had been hung by the Vigilance Committee for crimes done in California.

EARLY DOCTORS AND THEIR TIMES

When the soldiers came to the Fort in 1850, the nearest settlers were at McGuire's Bend in the southern part of the county, but when they left in the fall of 1853 there were several permanent settlers in Fort Dodge and in the surrounding country. The first doctor was Dr. Charles Keeny, but he left with the soldiers, since he was the army doctor. Dr. S. B. Olney was the first resident physician and he was followed by Dr. Nicholson. Dr. Charles Bissell is mentioned as going with the companies to the relief of the settlers after the Spirit Lake Massacre. He was said to have been one of the most valuable members of the relief force, but he must have left soon after that because there is no further mention of him.

There were so few people here Dr. Olney did not have enough to do, and became the first county superintendent of schools as well as the first doctor, but after a few years he could devote all his time to the practice of medicine. The way of the doctor was hard. At first there were no roads and only a trail at best. After the traffic became great enough to make a good trail, in good weather the roads were very good—as good as the gravel roads of today, but fifteen minutes of rain made them slippery and a good rain made them almost impassable. In the fall

and spring the mud was almost unbelievable, and in the winter even the trails would be drifted out due to the wind and snow. Out into such weather and on such roads the doctors had to go whether other folks could or not, and if they got back without stalling down or suffering frozen feet or fingers or cheeks they were lucky. They traveled in light cutters or sleighs in winter and in summer they went in two-wheeled carts or light buggies. They often had to travel on horseback. Some doctors took an inordinate pride in their fine horses and equipment and harness, driving high stepping and beautiful horses, but most of the hard driving was done with bronchos.

Their professional equipment was very simple, a few drugs, mixed by the doctors themselves, a medicine case, a surgical instrument case which could be carried in the pocket, and a few other instruments kept in the office. They had no stethoscopes, no microscopes and no fever thermometers. The fever thermometer was not developed into a practical instrument until about 1870. There were no laboratories, x-ray machines, metabolism tests, cardiograms or any of the elaborate paraphernalia of the modern doctor. They merely needed a plain table or even a lounge on which to examine patients. Yet with this meager equipment they did very well and satisfied their patients. Of course nothing was known about bacteria and their rôle in causing so many diseases. The diseases these early doctors treated were much the same as those today, but there were differences. For instance, the only disease for which there was induced immunity was vaccination for smallpox. Typhoid fever was common and fatal and they knew nothing about it being a water-borne infection; therefore when a village well became infected the whole population was likely to become ill, and sometimes there were not enough well persons to care for the sick. Tuberculosis was the most fatal of all diseases; one out of every seven persons who died did so from tuberculosis, and inasmuch as several persons in a family were often afflicted, the idea became universal that it was hereditary. Bovine tuberculosis, milk infection, kyphosis of the spine, hip joint disease, white swelling of the knee, or scrofula as related to tuberculosis, were unknown.

Diphtheria was a terrible scourge in the early days. No one knew its origin and the early doctor had to treat it as best he could. The bacteria will grow well on potatoes or almost any vegetable, and if the potato bin became infected, the entire household would become infected; nearly every child would have diph-

theria and about 75 per cent would die. Malaria or ague was also common in Iowa in the early day, and no one dreamed that the mosquito was responsible. Owing to screening of houses and keeping the mosquitoes from biting a malaria patient, that disease was pretty well eradicated without anyone of that day knowing why. Lockjaw was invariably fatal and there was no way to prevent it. The same was true of hydrophobia. Puerperal fever was a dread disease and was carried from one patient to another by the doctor, but neither the doctor nor the patient knew it, and took no precautions against it. Bacteria were unknown and the idea that certain diseases were caused by bacteria, was undreamed of. All wounds, whether made by the surgeon or by accident, were expected to suppurate, and they did.

Any one could call himself a doctor and practice if he could get anyone to become his patient. The first law regulating the practice of medicine was passed by the Iowa legislature some time in the eighties, and even then, if a man had practiced five years he was allowed to continue. There were three systems of medicine, the regular, or as it was called by the homeopaths, the allopathic, the homeopathic and the eclectic. The eclectic system disappeared early, the homeopathic dropped out about thirty years ago, leaving the regular as the only system in use today. The trouble was that none of them was on a scientific basis, but after medicine became a real science, the eclectic school dropped out of the running. The homeopathic system tried for a time to adopt the scientific facts which had been discovered and adopted by the regular school, but it was so expensive to establish and maintain the requisite laboratories and personnel that the effort was finally abandoned. However, there is an abundance of cults in Iowa.

As the towns in Iowa became larger there came another form of quackery. For some time there were no specialists, each man had to do every thing, but later the advertising quacks appeared. They would advertise that they were great "specialists". They were really quacks of the first order and failures as practitioners, but they could hoodwink a considerable part of the population. That as well as the Indian shows came to an end after the passage of the itinerant practice law, which made all such men pay a large license fee before beginning to practice on the simple. We do not hear of them anymore, and the Indian medicine shows are also things of the past.

There was a regular medical school in Iowa City and a homeopathic department, but the

attendance of the homeopathic school became so small that the board of regents abandoned it. The legislature rehabilitated it but it eventually died from lack of attendance. The profession became increasingly scientific, and during the eighties we can say that medicine was on a truly scientific basis. Medical schools became numerous, most of them without facilities for scientific studies. Due to the efforts of the American Medical Association, requirements for practice were placed so high that more than half of the schools had to discontinue their courses. One time there were seven schools in Iowa, two in Iowa City, two in Keokuk, one in Des Moines, one in Sioux City and one in Council Bluffs. Now there is one, the Medical Department of the State University of Iowa.

HOSPITALS

The first hospital in the county was built in the Fort in 1850 and managed by the army doctor, Dr. Charles Keeny. After he left in 1853, there was no hospital for more than forty years. A group of doctors led by Dr. Ristine established the first one, but it ceased to operate because of lack of patronage. In 1899 Miss Wing and Mrs. Thompson started a private hospital and ran it successfully for some two years when Miss Wing suddenly died. Three nurses came, Miss Lindquist from Gowrie and Miss Nelson and Miss Ostrum, both from Rock Island, Illinois. All three were graduates from Augustana Hospital in Chicago. These hospitals were hospitals in name only. They were in old residences and without equipment for hospitals; there were no laboratory facilities and no x-ray equipment, but they supplied the needs for hospitals at that time. Notwithstanding the lethargy of the people in Fort Dodge on the need for a hospital, a proposal from the Sisters of Mercy from Dubuque was obtained. They demanded \$25,000 from Fort Dodge and a site; they supplied \$50,000. The entire town and country were canvassed and subscriptions of \$28,000 were secured. The sisters then demanded that the subscription list be guaranteed. After a second canvass the list was guaranteed and at last the hospital was finished and opened in 1908. It had cost the sisters about \$75,000 and there was no elevator or laboratory or x-ray equipment. However they came with time and after about fifteen years an addition was built as large as the original hospital. Two nurses homes have been subsequently built and now the sisters have an investment of over half a million dollars.

Some years later the Lutherans started to raise money to build a hospital. It took over six

years to raise the money and build the hospital, but at last it was done, and was opened in 1932. Now we have very good hospital facilities. Each hospital can care for some 120 patients: all have well-equipped laboratories and x-ray departments. The Lutheran hospital has also added a fine nurses' home. Mercy hospital has always operated a nurses' training school, but the Lutheran hospital has always employed trained nurses. Fort Dodge is the medical and surgical center of a large area, and the dreams of a few physicians forty years ago have come true. Most of the doctors who founded the hospitals and built up the quantity and quality of the work done here are gone, but their work will remain always. A new generation of young men has taken over the work and they are doing it well.

COMING MEETINGS

American Orthopsychiatric Association, Nineteenth Annual Meeting, will be held at the Hotel Statler, Detroit, Michigan, February 19, 20 and 21, 1942. Preliminary program may be secured from Helen P. Langner, M.D., chairman of the publicity committee, Vassar College, Poughkeepsie, New York.

American Association of Industrial Physicians and Surgeons, and the American Industrial Hygiene Association will hold their joint annual convention in Cincinnati from April 13 to 17, 1942. Program covers medical and hygienic problems associated with the present task of American industry in national defense. Address Dr. A. D. Cloud, 540 North Michigan Avenue, Chicago, Illinois.

American College of Physicians, Twenty-sixth Annual Session, will be held in St. Paul, Minnesota, April 20 to 24, 1942. Programs may be obtained by writing Mr. Edward R. Loveland, executive secretary of the College, 4200 Pine Street, Philadelphia, Pennsylvania.

American College of Surgeons, Thirty-second Annual Clinical Congress, will be held in Chicago, October 19 to 23, 1942, instead of in Los Angeles as originally planned. Headquarters will be at the Stevens Hotel. The Twenty-fifth Annual Hospital Standardization Conference, sponsored by the College, will be held simultaneously. Programs of both meetings will be based chiefly on wartime activities as they affect surgeons and hospital personnel in military and civilian service. Address secretary of the College, 40 East Erie Street, Chicago, Illinois.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

INFANTILE PARALYSIS—A Symposium Delivered at Vanderbilt University in April, 1941. Published by the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York. Price, \$1.25.

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD—By William E. Ladd, M.D., professor of child surgery; and Robert E. Gross, M.D., associate in surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

ORBITAL TUMORS—By Walter E. Dandy, M.D., adjunct professor, neurological surgery, Johns Hopkins University. Oskar Piët, New York, 1941. Price, \$5.00.

IMMUNITY AGAINST ANIMAL PARASITES—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University, Columbia University Press, New York, 1941. Price, \$3.50.

THE MODERN TREATMENT OF SYPHILIS—By Joseph Earle Moore, M.D., associate professor of medicine, The Johns Hopkins University. Charles C. Thomas, Publishers, Springfield, Illinois, 1941. Price, \$7.00.

RHEUMATIC FEVER IN NEW HAVEN—Edited by John R. Paul, M.D., professor of preventive medicine, Yale University School of Medicine. Science Press Printing Company, Lancaster, Pennsylvania, 1941. Distributed by the Milbank Memorial Fund, 40 Wall Street, New York. Price, \$1.00.

HANDBOOK OF COMMUNICABLE DISEASES—By Franklin H. Top, M.D., Director, Division of Communicable Diseases and Epidemiology, Herman Kiefer Hospital and Detroit Department of Health. The C. V. Mosby Company, St. Louis, 1941. Price, \$7.50.

THE COMPLETE WEIGHT REDUCER—By C. J. Gerling. Harvest House, 70 Fifth Avenue, New York, 1941. Price, \$3.00.

THE MARCH OF MEDICINE—New York Academy of Medicine Lectures to the Laity, 1940. Columbia University Press, New York, 1941. Price, \$2.00.

SYNOPSIS OF MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY—By Forrest R. Davison, M.Sc., Ph.D., assistant professor of pharmacology, School of Medicine, University of Arkansas. The C. V. Mosby Company, St. Louis, 1940. Price, \$5.00.

METHODS OF TREATMENT—By Logan Clendening, M.D., and Edward H. Hashinger, M.D., medical department of the University of Kansas. Seventh edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

ACCIDENTAL INJURIES—By Henry H. Kessler, M.D., attending orthopedic surgeon, Newark City Hospital. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1941. Price, \$10.00.

TEXTBOOK OF PEDIATRICS—By J. P. Crozer Griffith, M.D., emeritus professor of pediatrics, University of Pennsylvania; and A. Graeme Mitchell, M.D., professor of pediatrics, University of Cincinnati. Third edition, revised and reset. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

HEMORRHAGIC DISEASES—By Kaare K. Nygaard, M.D., former fellow in surgery, The Mayo Foundation. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

TECHNIC OF CONTRACEPTION CONTROL—By Robert L. Dickinson, M.D., and W. E. Morris, M.D. The Williams and Wilkins Company, Baltimore, 1941. Price, fifty cents.

CARDIAC CLASSICS—By Fredrick A. Willius, M.D., and Thomas E. Keys, M.D., The Mayo Clinic. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

BOOK REVIEWS

INFANT NUTRITION

By Williams McKim Marriott, M.D., late professor of pediatrics, Washington University School of Medicine. Revised by Philip C. Jeans, M.D., professor of pediatrics, State University of Iowa, College of Medicine. Third edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

The third edition of Marriott's "Infant Nutrition" follows the plan of previous editions, namely, a summarization of the present-day knowledge concerning the nutritional requirements of infants under normal and pathologic conditions. Revisions and additions have been made wherever necessitated by advances in knowledge. Several changes have been made in the first chapter on growth and development. Comparison of recent figures with older tables shows that the average infant of today grows faster, both in length and weight, than the average baby of twenty years ago. The height-age and height-weight charts of Kornfeld are illustrated.

The discussions of the energy, protein, carbohydrate, fat, mineral and water metabolism are divided into separate chapters. Extensive revisions, in keeping with our modern concept, have been made in the chapter on vitamins. It has been found that infants who are given from 300 to 400 units of Vitamin D daily retain more calcium and phosphorus and grow faster than infants on lower or higher dosages. The material on artificial feeding and special and proprietary foods presents few changes from the original text. However, the third edition is

unique in that names of proprietary foods and products are not given.

In this book the present-day knowledge of nutrition, based on scientific experiments and clinical experience, is stated in a clear, concise style. The volume remains as a fundamental text for the pediatrician and the general practitioner.

C. F.

EXERCISES IN ELECTROCARDIOGRAPHIC INTERPRETATION

By Louis N. Katz, M.D., director of cardiovascular research, Michael Reese Hospital, Chicago. Lea and Febiger, Philadelphia, 1941. Price, \$5.00.

This textbook enables the reader to acquire a complete working knowledge of electrocardiographic interpretation. The author has presented, thoroughly and effectively, unknown records which are accompanied by many illustrations. An appendix has been included, consisting of ninety case records, which are very well illustrated.

The book is replete with sections on inspection, determination of rhythm and unusual beats, measurements of duration and amplitude of deflections, description of the record, and correlation and evaluation of records. Every page has an associated graphic accompaniment which serves as an excellent explanatory measure.

The use of this splendid living clinic in electrocardiography by every internist is well warranted.

J. W. C.

METHODS OF TREATMENT

By Logan Clendening, M.D., and Edward H. Hashinger, M.D., medical department of the University of Kansas. Seventh edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

This volume fills the dire need of the student and practitioner who are eager for condensed information in the modern methods of treatment.

Since drugs are one of the important forms of treatment, the author stresses the value of knowing thoroughly eight useful drugs so that proper application may be made. The chapter on immunologic products presents a brief, but up-to-the-minute, knowledge of the latest uses and proper interpretation. The problem of dietetics may be greatly solved by studying this chapter since a large percentage of Americans have an unbalanced diet.

Other chapters on infectious diseases, allergy, deficiency diseases, the cardiovascular system, the digestive system, the renal system and many others, present the latest treatment and procedures.

It is a well-balanced and practical book on methods of treatment.

A. M. S.

SYNOPSIS OF MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY

By Forrest Ramon Davison, M.Sc., Ph.D., assistant professor of pharmacology, School of Medicine, University of Arkansas. The C. V. Mosby Company, St. Louis. Price, \$5.00.

This is an excellent volume of six hundred pages written on the premise that pharmacology is an integral part of medicine and that the theoretic study of drugs should not be divorced from the practical application of them. This work presents pharmacology as an applied subject and not as a separate entity.

The content of the book includes a brief chapter on the basic principles of pharmacology, a similar brief consideration of materia medica, a brief but excellent chapter on prescription writing, and a short consideration of toxicology. The greater portion of the text is devoted to pharmacology and covers the most important and most useful drugs ordinarily employed in the practice of medicine. The subject matter is considered under the definite headings of physiologic action—the drugs acting on the skin and mucous membranes, the gastrointestinal tract, central nervous system, peripheral nerves, etc. There are short chapters on the vitamins, the hormones and other biologicals. There is a brief resumé of sulfanilamide and related compounds.

This book may be highly recommended to practitioners of medicine and to medical students.

D. K.

THE TREATMENT OF INFANTILE PARALYSIS IN THE ACUTE STAGE

By Elizabeth Kenny. Bruce Publishing Company, Saint Paul, Minnesota, 1941. Price, \$3.50.

The publication of this book by Sister Kenny is especially timely since her treatment of infantile paralysis in the acute stage has been presented in both lay and professional journals. The technic of the Kenny method includes the location of the muscles in active spasm, the application of hot fomenta to the affected muscles, passive movement of the muscles when the pain has subsided and finally re-education of the patient by active movement of the muscles. From the evidence presented the Kenny method has been more successful in preventing complications than treatment based on immobilization.

There are several illustrated chapters dealing with restoration of function to various muscle groups. Most of these chapters are the lectures given to medical groups at the General Hospital, Minneapolis, Minnesota. This form of presentation has resulted in considerable repetition. It is unfortunate that the book is written in an argumentative style. Nevertheless, the citation of so many cases of acute infantile paralysis without complication is evidence of the superiority of the "Kenny Method" over the "orthodox" treatment by immobilization.

C. F.

ELECTROCARDIOGRAPHY

By Louis N. Katz, M.D., director of cardiovascular research, Michael Reese Hospital, Chicago. Lea and Febiger, Philadelphia, 1941. Price, \$10.00.

This textbook offers a methodical and detailed analysis of the entire field of electrocardiography. The author has included many illustrative charts which facilitate correlation and understanding.

The text is divided into three sections. Section I discusses principles, heart electrical currents, cardiac anatomy and physiology, and the value of the electrocardiogram. Section II describes the normal and abnormal electrocardiogram, variations accompanying drug therapy, findings in coronary disease, and the findings in many chronic diseases. Section III is devoted to a detailed description of the findings which accompany the arrhythmias.

The volume is a very comprehensive treatise which will prove invaluable as a reference, atlas and guide in the library of every physician.

J. W. C.





CAT.

Carl B. Bush, M.D.
President
Iowa State Medical Society
1941-1942

The JOURNAL of the Iowa State Medical Society

VOL. XXXII

DES MOINES, IOWA, MARCH, 1942

No. 3

IOWA STATE MEDICAL SOCIETY

Organized in 1850

Ninety-first Annual Session

Des Moines, Iowa - April 15, 16 and 17, 1942

Do not fail to register. Registration Bureau—Hotel Fort Des Moines



PROGRAM

GENERAL SESSION

Wednesday Morning, April 15

9:00 a. m.

Main Ball Room

Opening Exercises:

Invocation—

REVEREND MARVIN O. SANSBURY

Greetings—

JAMES E. DYSON, M.D., President,
Polk County Medical Society

Response—

GEORGE C. ALBRIGHT, M.D., Second
Vice President, Iowa State Medical
Society

Address:

Differential Diagnosis of Meningeal
Irritations

JOHN A. TOOMEY, M.D., Associate
Professor of Pediatrics, Western Re-
serve University School of Medicine,
Cleveland, Ohio

Recess to Visit Exhibits

Address:

Carcinoma of the Stomach

JAMES T. PRIESTLEY, M.D., Asso-
ciate Professor of Surgery, Univer-
sity of Minnesota Graduate School,
Rochester, Minnesota

President's Address:

EARL B. BUSH, M.D., Ames

GENERAL SESSION

Thursday Morning, April 16

9:00 a. m.

Main Ball Room

9:00-9:45
Clinic:
REGINALD FITZ, M.D., Boston, Mas-
sachusetts

Address:

Treatment of Raw Surfaces Result-
ing from Burns and Injuries

SUMNER L. KOCH, M.D., Associate
Professor of Surgery, Northwestern
University Medical School, Chicago,
Illinois

9:15-10:00

Recess to Visit Exhibits

9:45-10:30

Address:

Treatment of Raw Surfaces Result-
ing from Burns and Injuries

10:30-10:45

Cesarean Section

JOHN L. MCKELVEY, M.D., Profes-
sor of Obstetrics and Gynecology,
University of Minnesota Medical
School, Minneapolis, Minnesota

Address:

10:45-11:15

Allergy

FRENCH K. HANSEL, M.D., Asso-
ciate Professor of Clinical Otolaryn-
gology, Washington University
School of Medicine, St. Louis, Mis-
souri

10:15-11:00

11:15-11:45

Sectional Conferences

Wednesday Afternoon, April 15

MEDICAL SECTION Albert A. Schultz, M.D., Chairman Main Ball Room	SURGICAL SECTION Thomas F. Suchomel, M.D., Chairman South Ball Room	EYE, EAR, NOSE AND THROAT SECTION Francis E. Powers, M.D., Chairman Room 1124
Lesions About the Eyes in Acute Infectious Diseases— JOHN A. TOOMEY, M.D., Cleveland	Choice of Treatment for Duodenal Ulcer— JAMES T. PRIESTLEY, M.D., Rochester	Unilateral Exophthalmos Caused by Arteriovenous Aneurysm— JOHN C. CUNNINGHAM, M.D., Dubuque Discussers— WALTER E. WEST, M.D., Centerville J. KENNETH VON LACKUM, M.D., Cedar Rapids
Symptoms of Pulmonary Disease— LEON J. GALINSKY, M.D., Oakdale Discussers— J. CARL PAINTER, M.D., Dubuque JOHN RUSSELL, M.D., Des Moines	Factors in Lowering Mortality of Ruptured Appendicitis— ALFRED A. EGGLESTON, M.D., Burlington Discussers— CARL H. MATTHEY, M.D., Davenport HOWARD I. DOWN, M.D., Sioux City	Physiology of the Larynx and Phonation— GORDON F. HARKNESS, M.D., Davenport Discussers— RALPH C. CARPENTER, M.D., Marshalltown CECIL C. JONES, M.D., Des Moines
Useful Drugs— HORACE M. KORNS, M.D., Iowa City Discussers— JOHN C. SHRADER, M.D., Fort Dodge EUGENE B. FLOERSCHI, M.D., Council Bluffs	Inguinal Hernia— BARCLAY J. MOON, M.D., Cedar Rapids Discusser— GEORGE H. CLARK, M.D., Oskaloosa	Retinitis Pigmentosa— JESSE H. MCNAMEE, M.D., Des Moines Discussers— WILLIS L. McCONKIE, M.D., Carroll WILLIAM P. HOFMANN, M.D., Davenport
Hypothyroidism and Heart Disease— CARL W. SMITH, M.D., Dubuque Discussers— E. MARSH WILLIAMS, M.D., Oskaloosa SAMUEL P. LEINBACH, M.D., Belmond	Acute Abdominal Emergencies— BERNARD J. DIERKER, M.D., Fort Madison Discussers— JAMES C. DONAHUE, M.D., Centerville ADRIAN J. SCHROEDER, M.D., Marshalltown	Glucoma— CECIL S. O'BRIEN, M.D., Iowa City Discussers— L. A. TAYLOR, M.D., Ottumwa ROGER R. FLICKINGER, M.D., Mason City
Massive Gastroduodenal Hemorrhage— JOHN L. KESTEL, M.D., Waterloo Discussers— HARRY A. COLLINS, M.D., Des Moines ERNEST E. SHAW, M.D., Indianapolis	Review of Diseases of the Pancreas— ERNEST M. KERSTEN, M.D., Fort Dodge Discussers— PRINCE E. SAWYER, M.D., Sioux City WALTER E. FOLEY, M.D., Davenport	Newer Methods of Treating Strabismus— OSCAR B. NUGENT, M.D., Chicago

OUR GUESTS



JOHN L. McKELVEY, M.D.
Minneapolis



JAMES T. PRIESTLEY, M.D.
Rochester



SUMNER L. KOCH, M.D.
Chicago



WILLIAM R. CUBBINS, M.D.
Chicago

Sectional Conferences Thursday Afternoon, April 16

MEDICAL SECTION	SURGICAL SECTION	EYE, EAR, NOSE AND THROAT SECTION
Albert A. Schultz, M.D., Chairman Main Ball Room	Thomas F. Suchomel, M.D., Chairman South Ball Room	Francis E. Powers, M.D., Chairman Room 1124
Concerning Certain Peculiarities of Gallstone Disease— REGINALD FITZ, M.D., Boston	Fractures Around the Knee Joint— WILLIAM R. CUBBINS, M.D., Chicago	Traumatic Mediastinitis— JAMES A. DOWNING, M.D., Des Moines
Clinical Pathologic Conference— HAROLD W. MORGAN, M.D., Mason City	Etiology and Treatment of Premature Separation of the Normally Implanted Placenta— J. STUART MCQUISTON, M.D., Cedar Rapids	Discussers— JOHN C. PARSONS, M.D., Des Moines DEAN M. LIERLE, M.D., Iowa City
Differential Diagnosis of Jaundice— J. STUART MCQUISTON, M.D., Cedar Rapids	John L. MCKELVEY, M.D., Minneapolis	Nasal Obstruction— WAYNE J. FOSTER, M.D., Cedar Rapids
Discussions— FRED STERNAGEL, M.D., West Des Moines	Primary Fractures of the Hip— HENRY F. DOLAN, M.D., Anamosa	Discusser— MARTIN J. RYAN, M.D., Sioux City
ALLEN C. STARRY, M.D., Sioux City	Discussions— CARL J. LOHMANN, M.D., Burlington	Office Procedures in Ophthalmology— JOSEPH E. DVORAK, M.D., Sioux City
Laboratory and Clinical Findings of Pancreatic Diseases— MILO G. MEYER, M.D., Marshalltown	WILLIAM G. BESSMER, M.D., Davenport	Discussions— ORVAL L. THORBURN, M.D., Ames GARFIELD M. THEIN, M.D., Oelwein
Discussions— FRED H. LAMB, M.D., Davenport	Genital Prolapse— ROBERT M. COLLINS, M.D., Council Bluffs	Chronic Catarrhal Otitis Media— DEAN M. LIERLE, M.D., Iowa City
WILLIAM D. PAUL, M.D., Iowa City	Discussions— ADDISON W. BROWN, M.D., Des Moines	Discussers— FRANK G. CARLSON, M.D., Mason City
Symposium on the Use of the Sulphonamides— Chairman— HERMAN J. SMITH, M.D., Des Moines, Chairman	CECIL W. SEIBERT, M.D., Waterloo	HAROLD O. GARDNER, M.D., Waterloo
Pediatrics— DENNIS H. KELLEY, M.D., Des Moines	Practical Application of Prenatal and Postnatal Care— CECIL W. SEIBERT, M.D., Waterloo	GASTRO-INTESTINAL— CONAN J. FEISEN, M.D., Des Moines
Genito-urinary— WILLIAM R. HORNADAY, M.D., Des Moines	Discussions— Roderick F. MACDOUGAL, M.D., Cedar Rapids	Hematology— DIEDRICH J. HAINES, M.D., Des Moines
Eye, Ear, Nose and Throat— BENJAMIN F. KILGORE, M.D., Des Moines	4:00-4:30	Allergy in Otolaryngology— FRENCH K. HANSEL, M.D., St. Louis
Gastro-intestinal— CONAN J. FEISEN, M.D., Des Moines		4:00-4:30
Hematology— DIEDRICH J. HAINES, M.D., Des Moines		

OUR GUESTS



REGINALD FITZ, M.D.
Boston



JOHN A. TOOMEY, M.D.
Cleveland



FRENCH K. HANSEL, M.D.
St. Louis



OSCAR B. NUGENT, M.D.
Chicago

GENERAL SESSION**Friday Morning, April 17****Main Ball Room****Symposium on Injuries**

9:00-11:00

Chairman—

WILLIAM R. CUBBINS, M.D., Clinical Professor of Bone and Joint Surgery, Loyola University School of Medicine, Chicago, Illinois

Compound Fractures—

DWIGHT C. WIRTZ, M.D., Des Moines

Nerve Injuries—

EDWARD H. FILES, M.D., Cedar Rapids

Head Injuries—

ALBERT I. HAUGEN, M.D., Ames

Chest Injuries—

GEORGE P. ELVIDGE, M.D., Perry

Address:

11:00-11:30

Procurement and Assignment of Physicians

MAJOR SAM F. SEELEY, M.C., Executive Officer, Washington, D. C.

Report of House of Delegates and Installation of President

11:30-12:00

HOUSE OF DELEGATES**First Meeting, Wednesday Afternoon, April 15**

3:30 p. m.

The Cabin, Hotel Fort Des Moines**Roll Call****Approval of Minutes of Friday Morning Session, 1941****Reports of Officers****Reports of Committee Chairmen****Memorials and Communications****New Business****Election of Committee on Nominations****Second Meeting, Friday Morning, April 17**

7:30 a. m.

South Ball Room, Hotel Fort Des Moines**Roll Call****Reading of Minutes****Report of Committee on Nominations****Election of Officers****Reports of Committees****Unfinished Business****New Business****Announcement of Committees****Adjournment****ANNUAL BANQUET****Thursday Evening, April 16****Main Ball Room, Hotel Fort Des Moines**

6:30 p. m.

Toastmaster:

JAMES C. HILL, M.D., Newton

President's Address:

EARL B. BUSH, M.D., Ames

President-Elect's Address:

FRANK P. WINKLER, M.D., Sibley

Address:

HAROLD V. GASKILL, Ph.D., Ames

Introduction of Guest Speakers and Section Chairmen**Section Chairmen****Section on Medicine—**

Chairman, ALBERT A. SCHULTZ, M.D., Fort Dodge

Section on Surgery—

Chairman, THOMAS F. SUCHOMEL, M.D., Cedar Rapids

Section on Eye, Ear, Nose and Throat—

Chairman, FRANCIS E. POWERS, M.D., Boone

LOCAL COMMITTEES**Clinical Material**

RICHARD F. BIRGE
ALONZO L. JENKS, JR.

Entertainment

HOWARD D. GRAY
EMORY L. MAURITZ
DOUGLAS N. GIBSON

Hosts for Guest Speakers

WALTER L. BIERRING
OLIVER J. FAY
WILLIAM W. PEARSON
LEE F. HILL
LAWRENCE E. KELLEY
ROBERT J. LYNOH
LEWIS M. OVERTON

Social Events**PRE-CONVENTION GOLF TOURNAMENT AND DINNER****Tuesday Afternoon, April 14****Wakonda Club****STATE SOCIETY OF IOWA MEDICAL WOMEN****LUNCHEON AND PROGRAM****Wednesday, April 15****Younkers Tea Room—12:15 p. m.**

MILITARY SURGEONS' DINNER

Wednesday Evening, April 15

South Ball Room, Hotel Fort Des Moines
Dinner—6:30 p. m.Address:
MAJOR ROBERT A. CULBERTSON, M.C., Induction
Center, Fort Des Moines, Iowa.**STATE SOCIETY OF IOWA MEDICAL
WOMEN**

Dinner and Meeting

Wednesday, April 15

Younkers Tea Room—6:30 p. m.

SMOKER

Wednesday Evening, April 15

Main Ball Room, Hotel Fort Des Moines
8:30 p. m.**WOMAN'S AUXILIARY AND VISITING
WOMEN**

Smorgaasbord Dinner—6:30 p. m.

Bridge—8:00 p. m.

Wednesday, April 15
Hotel Kirkwood**ANNUAL BANQUET**Main Ball Room—Hotel Fort Des Moines
Thursday, April 16—6:30 p. m.
Physicians, their wives and guests.**Special Meetings**Iowa Alumni Association Luncheon
Wednesday Noon, April 15South Ball Room, Hotel Fort Des Moines
12:15 p. m.Iowa Orthopedic Club
Wednesday Noon, April 15Green Room—Hotel Fort Des Moines
12:15 p. m.Ophthalmology-Otolaryngology Dinner
Wednesday Evening, April 15
Des Moines Club
6:30 p. m.
All members of the Section invited.Class of Iowa '31 Luncheon
Thursday, April 16Speakers Bureau Committee Luncheon
Thursday, April 16
12:15 p. m.
Dining Room 1**FRACTURE COMMITTEE LUNCHEONS AND
PANEL DISCUSSIONS**

Thursday, April 16—12:15 p. m.

These luncheons and panel discussions are sponsored by the Fracture Committee of the Iowa State Medical Society and are open to all members. Doctors interested in fracture work are cordially invited to attend the luncheon discussing the subject they most wish to hear.

Dining Room No. 2—Fractures of the Lower Extremity

Leaders—WILLIAM G. BESSMER, M.D., Davenport.
FRED L. KNOWLES, M.D., Fort Dodge.

Green Room—War Wounds and Associated Fractures

Leaders—KARL R. WERNDORFF, M.D., Council Bluffs.
COLONEL EARL B. BUSH, M.C., Ames.

Flamingo Room—Fractures of the Hip

Leaders—LEWIS M. OVERTON, M.D., Des Moines.
A. KEITH DROZ, M.D., Washington.**State Society
of
Iowa Medical Women
and
AMERICAN MEDICAL WOMEN'S
ASSOCIATION—Branch 19**Wednesday, April 15, 1941
Younkers Tea Room
Des Moines, Iowa**LUNCHEON**
12:15 p. m.President's Address—
ARLINE M. BEAL, M.D., DavenportBusiness Meeting
Election of Officers
Address:

Pioneer Medical Women of Iowa

DINNER
6:30 p. m.Business Meeting
Appointment of Committees by President
Scientific Papers
Informal Discussion
Speakers and topics for papers and discussions will be announced later.

Please send reservations for both meetings to:

SOPHIE SCOTT, M.D.
1300 E. Grand Avenue
Des Moines, Iowa

SCIENTIFIC MOVING PICTURES

Rooms 317-318---Hotel Fort Des Moines

Wednesday Morning, April 15

Splenectomy for Banti's Disease (Color)

Roy D. McClure, M.D., Detroit, Michigan

Obstructive Resection (Color)

Fred W. Rankin, M.D., Lexington, Kentucky

Application of Thick Split Skin Grafts (Color)

J. Barrett Brown, M.D., St. Louis, Missouri

Purposeful Splinting (Color)

Sumner L. Koch, M.D., Michael L. Mason, M.D.,
and Harvey S. Allen, M.D., Chicago, Illinois

Surgical Treatment of Varicose Veins (Color)

Henry N. Harkins, M.D., Detroit, Michigan

Lumbar Ureterotomy for Stone

Frederic E. B. Foley, M.D., Minneapolis, Minnesota

Intracapsular Cataract Extraction of Subluxated
Cataract with Loop (Color)

Ramon Castroviejo, M.D., New York, New York

Phthiriasis Palpebrarum (Color)

Ramon Castroviejo, M.D., New York, New York

Teno-recession without Sutures (Color)

John P. Lordan, M.D., Los Angeles, California

Larynx, Tracheobronchial Tree and Esophagus
(Color)

Paul Holinger, M.D., Chicago, Illinois

Approaches to the Surgical Spaces of the Neck

Samuel Iglauder, M.D., Cincinnati, Ohio

Treatment of Traumatic Injuries of the Face (Color)

Gordon B. New, M.D., Rochester, Minnesota

Wednesday Afternoon, April 15

Surgery of the Heart

Claude S. Beck, M.D., Cleveland, Ohio

Leg Amputation for Arteriosclerosis

New York Postgraduate Hospital, New York, New
York

Saphenous Vein Ligation and Retrograde Injection

New York Postgraduate Hospital, New York, New
York

Mecholy Chloride in the Treatment of Peripheral
Vascular Disease

New York Postgraduate Hospital, New York, New
York

Herniated Intervertebral Disc

J. R. Jaeger, M.D., Denver, Colorado

Removal of Intracranial Subdural Hematoma

J. R. Jaeger, M.D., Denver, Colorado

How to Make a Scientific Motion Picture

Howard L. Updegraff, M.D., Los Angeles, Cali-
fornia

Thursday Afternoon, April 16

Mechanism of the Heart Beat and Electrocardio-
graphy

Lewis M. Hurxthal, M.D., Boston, Massachusetts

Heart Beat Mechanism in Health and Disease—Par-
oxysmal Tachycardia

Clayton J. Lundy, M.D., Chicago, Illinois

Coramine as a Respiratory and Circulatory Stimu-
lant

Ciba and Company, Summit, New Jersey

Cine-fluorography

Clarence E. de la Chappelle, M.D., New York, New
York

Patent Ductus Arteriosus

Frank S. Dolley, M.D., Los Angeles, California

Fluoroscopic Diagnosis of Cardiac Infarction

Arthur M. Master, M.D., New York, New York

Manchester Operation for Uterine Prolapse (Color)

Louis E. Phaneuf, M.D., Boston, Massachusetts

Complete Laceration of the Perineum (Color)

Louis E. Phaneuf, M.D., Boston, Massachusetts

Cancer of the Female Breast (Color)

Frank E. Adair, M.D., New York, New York

Thursday Morning, April 16

Laryngeal Pathology (Color)

Joel J. Pressman, M.D., Los Angeles, California

Paralysis of the Larynx (Color)

Louis H. Clerf, M.D., Philadelphia, Pennsylvania

Friday Morning, April 17

This period will be reserved for repeat showings
of films for which such a request is made.

WOMAN'S AUXILIARY to the Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa

THIRTEENTH ANNUAL MEETING

Headquarters—Hotel Kirkwood

Des Moines, Iowa

PROGRAM

Wednesday, April 15, 1942

- 9:00 a. m. Registration
 Hotel Fort Des Moines
 Hotel Kirkwood
- 10:00 a. m. Executive Board Meeting, Hotel Kirkwood
 For Board Members and County Auxiliary Presidents
- 1:00 p. m. Luncheon—Board Members and County Auxiliary Presidents
- 6:30 p. m. Smorgasbord Dinner
 Pioneer Room, Hotel Kirkwood
 Both Doctors and Ladies Welcome.
 Entertainment during dinner hour.
- 8:00 p. m. Bridge—Hotel Kirkwood
-

Thursday, April 16, 1942

Hotel Kirkwood

9:00 a. m.

- Mrs. W. R. Hornaday, President, Presiding
- Invocation—
 MRS. E. A. HANSKE, Bellevue
- Address of Welcome—
 MRS. JULIUS S. WEINGART, President Polk County Woman's Auxiliary
- Response—
 MRS. F. W. MULSOW, Cedar Rapids, President-elect

Reading of Minutes—

Announcements of Committees—

Report of President—

Reports of State Officers—

Reports of Standing Committees—

Introduction of County Presidents—

Announcements—

Report of Registration—

Unfinished Business—

New Business—

- Address: Nutrition in Disguise 11:15 a. m.
 WILMA PHILLIPS STEWART
- Music— 12:15 p. m.
 Broadlawns Nurses Chorus—Directed by MRS. PERCY POTTER

Adjournment

PROGRAM

12:30 p. m.

Luncheon
 Hotel Kirkwood

Greetings—

EARL B. BUSH, M.D., Ames
 President, Iowa State Medical Society

Greetings—

FRANK P. WINKLER, M.D., Sibley
 President-elect, Iowa State Medical Society

Greetings—

JAMES C. HILL, M.D., Newton
 Chairman Advisory Committee to Woman's Auxiliary

Address: Our Part in Civilian Defense

THOMAS A. BURCHAM, M.D., Des Moines
 Chairman, Medical Advisory and Health Council
 of the Iowa Industrial and Civilian Defense
 Council

Presentation of Gertrude Downing Cup—

MRS. JAMES A. DOWNING

Reading of Minutes—

Report of Resolutions Committee—

Report of Nominating Committee—

Election of Officers—

Installation of Officers—

Election of Delegates to National Convention—

Adjournment

3:30 p. m.

Postconvention Board Meeting

BANQUET, HOTEL FORT DES MOINES

6:30 p. m.

This program, social and business, is for all visiting women. All eligible women are urged to become members.

NEWER CONCEPTIONS IN THE DIAGNOSIS AND TREATMENT OF URINARY TRACT INFECTIONS*

ARBOR D. MUNGER, M.D.
Lincoln, Nebraska

Urinary tract infections are of such frequent occurrence in all ages, that the forward-looking physician must of necessity have a fundamental concept of the bacteriology, pathology and therapy.

The vital consideration in any urinary tract infection is the essential question of kidney involvement. Remote infections of the coccal family in the teeth, tonsils, sinuses, prostate gland, gallbladder, adnexa, etc., may and do find their way to the kidney by way of the blood stream, and here the diminutive end arteries arrest bacterial emboli. Infections achieved in the bladder from direct ascent through the urethra, especially in the female, or via lymphatic drainage from the rectum, vaginal vault or cervix, or by contiguous extension through the bladder wall, reach the kidney through the lymphatic channels in the ureteral walls. Such infections are usually from the colon bacilli family. Coincidentally, the colon group may invade the kidney directly through the rich lymphatic supply existing between the kidney and the bowel. Incidentally, it must be stated that stasis and trauma play a very important rôle in the symptom picture of urinary tract infections. An obstructive process, with the resultant non-moving, infected urine and accompanying severe symptoms, may occur any place from the urethral meatus to a terminal calyx of the kidney.

Most cases of kidney infection are acute and after running a course of two or three weeks, the infection will subside and disappear. Not infrequently the infection will persist for several months in a continuous or intermittent state. Such a course usually bespeaks the involvement of both kidneys. The degree of infection and intensity of symptoms vary widely in this chronic state. Moreover, the symptoms in the chronic state may be so mild that infection is only discovered in the course of routine urinalysis of gram stain or culture.

BACTERIOLOGY

A working understanding of the bacteriology necessarily governs proper clinical appreciation. In this respect the value of a preliminary routine gram stain of the sedimented urine, gathered under aseptic precautions, cannot be overemphasized. A routine gram stain often discloses more than one form of bacterial infection, or it may

disclose different organisms on succeeding days. This is due to a predominating organism holding in abeyance a second organism which gains a foothold only after specific treatment has eradicated the superior infection. In certain cases a so-called abacterial pyuria is noted. This is most frequently noted in cases of advanced renal infection of long standing, accompanied by marked cicatricial damage and impaired renal function. Persistently repeated examinations will usually reveal infection by the coccal group.

Bacilli of the colon group will be found predominating in about 55 per cent of urinary infections. The two families most frequently being observed are the *Escherichia coli* and the *Aerobacter aerogenes*. *Escherichia coli* infection is confined largely to the superficial tissues of the kidney pelvis, its calices and tubules. This is proved by their rapid eradication under proper treatment. Then, too, this is evidenced by the relatively minimal deformities noted in diagnostic urogram studies, whereas, the *aerogenes* is more tenacious and resistant to bacteriostatic substances excreted in the urine and presents advanced deformity in the outline of the renal pelvis, its calices and ureter, or necrosis and impaired kidney function. The therapeutic response under specific therapy directed toward that organism is the desideratum here.

Among the coccal groups about 15 per cent of infections will be represented by the *Staphylococcus* family; the *Staphylococcus albus*, usually, the *Staphylococcus aureus*, only occasionally. These organisms usually come from the skin surface, while the *Streptococcus* family finds its way to the kidneys from the tonsils, sinuses, gallbladder and teeth areas. From the prostate gland and cervix, both *Staphylococcus* and *Streptococcus* are dispensed. Associated with the above organisms is the frequent occurrence of the *Micrococcus*. These latter are considered to be saphrophytic rather than pyogenic as are the other cocci. The *staphylococci* tend to produce cortical suppuration or abscesses, either renal or perirenal. The *micrococcii* may in themselves produce a pyuria, which picture, both objectively and subjectively, will rapidly be relieved under a few injections of neomycin.

The *Streptococcus faecalis* and the *Streptococcus viridans* are more frequent offenders than are the hemolytic streptococci, which are rare invaders of the urinary tract. *Streptococcus faecalis* presents much the same pathologic qualities as does the colon bacillus. It can be eradicated from the urinary tract by acidification and mandelic acid almost as easily as can the colon bacillus.

*Presented before the Pottawattamie County Medical Society, Council Bluffs, November 18, 1941.

The *Proteus* bacillus while presenting itself only in a small percentage of cases must be given adequate consideration because of its nasty aspect. Its appearance usually follows trauma by violence or our own instrumentation. It makes the urine ammoniacal through its tendency to split the urea. In its destructive activities it tends to destroy the kidney with diffuse purulent infection or malignant formation of stones.

It has long been known that urine is a good nutritive medium for organisms and bacteria. In fact, Pasteur used urine as well as wine and beer in his research work on the phenomenon of fermentation. The variation in the hydrogen ion concentration levels in the urine has a definite effect upon bacterial growth. In fact, we recognize a physiologic, a lethal and a bacteriostatic hydrogen ion concentration level for the various organisms in the urine. A knowledge of the relationship between the urinary *pH* level and the infecting organisms forms a relative basis for treatment in the individual case.

Bacillary infections for the most part present a persistently low *pH* of 5.2 to 6.0. Coccal infections give a higher range, 6.6 to 7.8. *Proteus* infections have a wide variation, ranging from 5.6 to 6.4 or from 7.8 to 9.0. Not infrequently the type of organism changes when the *pH* is changed by treatment. This, of course, indicates that it is a mixed infection with the dominating organism assuming conformity with the existing *pH*. It is my opinion that the *pH* of voided urine depends upon two factors, namely, the kidney function and the organism present. The kidney function affects the excretion of acid radicals and influences the *pH* of the urine. If the kidney function is badly impaired, it is impossible to produce extremely acid urine, hence the necessity for kidney function knowledge if acidification treatment is to produce the right results. Urea-splitting organisms give an intensely alkaline reaction, especially if there is a residual urine present behind an obstruction.

The extreme range of urinary *pH* is usually considered from 4.8 to 9.0. As a rule, morning urine is more acid than that collected throughout the day. With a normal kidney function the urinary *pH* can be lowered by diet or medication. Urinary *pH* levels as a rule remain stable if the urine is sterile.

There is a *pH* level in the urine below which death occurs to various organisms, respectively. This is known as the lethal *pH* level. Then again there is recognized in the urine the bacteriostatic *pH* level, or a level below which bacteria are not actually killed but are put in a dormant state, a

state in which they are no longer active. Then, of course, there are those recognized *pH* levels at which various bacteria flourish, the physiologic *pH* level. It is my opinion that it should be within the ken of every physician to recognize these levels for various bacteria. The maximum range of *pH* levels obtainable in vivo is recorded from a large series of compiled readings as ranging from 4.5 to the upper limits of 9.0. The following table presents the *pH* levels of experimental urine, *in vitro*, at which the bacteriostatic or critical level occurs, as well as the lethal, or death level for various organisms:

Organism	Lethal Bacteriostatic <i>pH</i> Level	<i>pH</i> Level
<i>Escherichia coli</i>	4.00	4.30
<i>Aerobacter aerogenes</i>	4.00	4.20
<i>Staphylococcus anhemolyticus</i>	4.60	4.90
<i>Pseudomonas pyocyanus</i>	4.50	4.70
<i>Streptococcus anhemolyticus</i>	4.00	4.50
<i>Streptococcus viridans</i>	5.00	5.50
<i>Streptococcus haemolyticus</i>	5.50	6.00
<i>Proteus vulgaris</i>	4.50	4.75

It can readily be seen from the above recital that the lethal urinary *pH* level *in vivo* is not readily feasible of attainment, since under our present methods of medication and procedure, we can only produce levels between 4.5 and 9.0. Only the *Streptococcus viridans* and the *Streptococcus haemolyticus* have a lethal *pH* level above the lowest obtainable physiologic *pH* level.

You will note from the tabulation also that the bacteriostatic or critical *pH* levels are from .2 to .5 higher than the lethal level, which brings all except *Escherichia coli* and *Aerobacter aerogenes* within the physiologic bounds. Since as we already know, infection is controlled with the prevention of bacterial growth and since the bacteriostatic or critical *pH* levels are within physiologic bounds, this level then is clinically as significant or more so for us than the demonstrated lethal level which, for the most part, is unattainable.

The efficacy of urinary acidification in the treatment of urinary infections depends upon the degree of acidity attained and the facility with which such urine can come in contact with the seat of infection. Urine is acidified in the terminal tubules, hence interstitial or deep-seated lesions of the kidney are not affected even though the urinary *pH* is low enough to render the urine sterile. The urine of one kidney may differ considerably from that of the other. Unilateral infection in a poorly functioning kidney would likewise probably not be helped by acidification. Not infrequently excellent results may be obtained with the low acidity in cases infected with a *Proteus vulgaris*. With other organisms, such as the *Escherichia coli*, while one may control the infection by establishing the bacteriostatic level, yet

unless a proper urinary antiseptic is coincidentally used, the infection cannot be eradicated.

Acidity alone will not always produce a bactericidal urine. (Note *Escherichia coli* and *Aerobacter aerogenes*). It can be used to advantage in conjunction with various antiseptic agents, such as mandelic acid or hexamethylenamine; even sulfathiazole works perfectly well in the presence of a low *pH* level. Acid medication also has a place in the treatment of chronic infections such as those occurring with calculus in which a complete cure is not expected. The infection can be held at a minimum, although no cure is enacted.

A great many of the bacteria which invade the urinary tract have or develop the peculiar capacity of splitting out urea which is being excreted in the urine with the consequent formation of ammonia which renders the urine alkaline. As most of you know, alkaline urine has a tendency to precipitate crystals of calcium carbonate. The laboratory worker has often seen such crystals in the urine of the normal person during the alkaline tide, and in such cases the findings are without pathologic significance. The alkaline tide in a urine occurs in the first two hours following the ingestion of a meal. However, a urine which is infected with a urea-splitting bacteria, is perpetually alkaline and contains those crystals in abundance. The continued presence of varying amounts of crystaloids has a strong tendency toward the formation of calcium phosphates—calcium carbonate calculi or stones. This tendency is probably aided and abetted by the partial destruction of the urea, which is one of the so-called hydrolytic substances in the urine, which substance increases the solubility of calcium salts and helps keep the urinary crystaloids from precipitating out in solution. It is well recognized by most observers that staphylococci themselves form an integral part of the stones which are studied. It may very possibly be that masses of urea-splitting bacteria act as a nucleus upon which the crystals gather, as the slime excreted by the oyster gathers around the grain of sand to form a pearl.

I believe it is generally accepted that about 75 per cent of calculus formation in the urinary tract is related to an infection with the urea-splitting organism. The remaining types of stones are due to dietary abnormalities, metabolic disorders, etc., and will not be considered here.

Mixed infections of the urinary tract have a decided urea-splitting ability. Likewise, the colon bacillus infection alone has a tendency to split urea. The bacillus *proteus*, the bacillus *pyocyanus*, the bacillus *influenzae*, the *Staphylococcus* infections, the *Streptococcus anhemolyticus* are

considered among the chief urea-splitting bacteria in the urinary tract. This may occur alone or in almost every conceivable combination, one with another, but always the colon bacillus or the *Staphylococcus*, and sometimes both, are among those present in every case of mixed infection.

CLINICAL PICTURE AND DIAGNOSIS

While not infrequently the clinical picture of urinary tract infections is confusing because of the lack of correspondence between the lesion and symptoms, on the other hand the prompt diagnosis that such a condition exists depends much upon arousing the suspicions of the medical attendant to the fact that the patient may have a kidney infection above everything else.

The first sign one would expect to find in kidney infections is pus in the urine and except at an early period in the very acute cortical infections or where the pus-laden urine is acutely stymied, say, as from a calculus, this will be true. Any urine gathered free from external contamination, showing pus cells, red blood cells (absent to many), and a gram stain revealing bacteria is diagnostic of a urinary tract infection.

The clinical picture varies from no symptoms at all to those of mild frequency, malaise and dull backache so prevalent in chronic pyelonephritis. This same picture with the added history of such intermittent acute symptoms as temperature, sharp back pain, dire urgency and frequency with pus, red blood cells and bacteria in the urine, will clinch the diagnosis of an acute exacerbation of a chronic pyelonephritis. The finding of acute costovertebral tenderness or pain to fist percussion denotes a kidney under tension and is of valuable significance. The more severe illness ushered in by sudden high temperature with chills of a remittent nature, acutely painful aching flank, with early bladder irritability, bespeaks the acute cortical infection of the coccal group, and one is less likely in this condition immediately to substantiate his suspicions with pus, red blood cells and bacteria in the urine. Here expectant therapy and persistent urinary observation will soon confirm the tentative diagnosis.

It is not, however, the above problems so familiar to all of us which offer the stumbling block to diagnosis as it is that severely acute fulminating type of case with rapid onset of extremely high temperature, interrupted chills, acutely painful flank and abdomen, which sets the trap for the unsuspecting attendant. These patients are all too frequently operated upon for an acute rupture of a hollow viscus, acute appendix, gallbladder or some other acute intraperitoneal inflammation.

Here the kidney has been the recipient of an overwhelming invasion of especially virulent organisms, usually of the coccal family, by way of the blood stream, and most frequently during the course of, or soon after, some pyemic infection on the skin surface, or perhaps following the removal of abscessed teeth or the drainage of a prostatic abscess. Pyuria and bacteria are not present early, but red blood cells are, varying from a few to a definitely smoky urine. An abdominal section should be indulged in cautiously in the presence of such an acute syndrome with red blood cells in the urine. Such cases, of course, present an acute diagnostic problem, but fifteen to thirty minutes spent in doing an intravenous urogram study will save many a heartache.

THERAPY

In anticipating the treatment of kidney infections, a mental survey of the several essential clinical data and findings must be entertained; the treatment is conservative in proportion to the picture presented and consists essentially of proper drainage, urinary antisepsis and prophylaxis. The institution of the usual postural drainage in the form of exaggerated decubitus is all that is necessary. If the drainage process reflects obstruction by a continuance of symptoms, an indwelling ureteral catheter, or if at the bladder neck, a urethral catheter, or where necessary, surgical drainage, must be instituted. Coincidentally, of course, the physician will treat the patient symptomatically with heat, opiates, etc., for the relief of pain, with belladonna, santon, etc., for the relief of bladder distress.

While in most cases the symptoms will in this manner be alleviated, it is coincidentally necessary that proper bactericidal therapy be begun. The distressing number of urinary antiseptics produced by various pharmaceutical houses is legion. Pouncing upon the peculiar psychology of the layman that any drug taken by mouth which will paint the urine a pretty color must be of potent anti-septic value, these same manufacturers have run the gamut of the entire series of the spectrum, from the gentlest violaceous to the deepest of reds. There are, however, a few acceptable urinary antiseptics, the intelligent use of which will give happy results. Of equal importance with the knowledge of the bacteriology in the urine to institute proper therapy, is knowledge of the hydrogen ion concentration in the urine, since from this basis has evolved our advancing knowledge of therapy.

For ordinary clinical purposes it can be accepted that the neutral pH zone of urine is between 5.9 and 6.5. Just as the pH in a culture medium of

any kind must be balanced for proper growth of the varying organisms, so do the various bacteria in the urine have a tendency to alter the pH from the neutral zone to suit their best growing fancy. In such instances the pH may vary from 5.0 to 9.0; yet there is no arbitrary zone constancy for any organism or group of organisms, except perhaps the *Proteus* and allied urea-splitting organisms which are in the high or alkaline pH zones. The ketogenic diet or high fat diet as first established by Clark was notably bactericidal but inconstant in its ketosis and difficult of application. The bactericidal factor in a ketone urine is beta-hydroxybutyric acid. The acid content of the urine may be very simply approximated for therapy purposes by adding five drops of the U. S. P. methyl red solution to two cubic centimeters of freshly voided urine. If the mixture shows red, the pH is a 5.0 or below and sufficiently acid for the acid therapeutic adjunct, namely, urotropin or mandelic acid.

Recent therapeutic developments of the sulfonamide drugs bid fair to replace acid therapy and the arsenicals. In 1935, Domagk, a German chemist, discovered that certain compounds called prontosil were bactericidal to streptococci. More recently it has become known that various of its derivatives are sulfanilamide, sulfapyridine, sulfathiazole and sulfadiazine, and although they may not be the long awaited panacea, certainly they have taken their place as very valuable adjuncts. These drugs will eradicate bacteria in both acid and alkaline urine, although they show a preference for the alkaline. They are more efficacious in eradicating colon bacilli and the aerogenes than is mandelic acid. Certain of these sulfonamides are definitely bacteriostatic for almost all forms of cocci, and their spectacular effect on the *Gonococcus* is as well known to the churchman as to the physician. We know they are not efficacious in all cases. They are probably the most efficient agents ever used by the physician to combat that ancient enemy, *proteus*, in both its vulgar and ammoniacal forms. In many instances the disappearance of this organism under a few doses of sulfanilamide is spectacular.

It must not be forgotten that certain baffling and stubborn cases will be met which do not react to treatment. These are technical urologic problems and should thus receive expert consideration. After the infection is combated or is found to be resistant, a zealous attempt at restoration of the residual and causative pathology and the elimination of focal areas should be instituted.

RECOGNIZING BORDERLINE CONDITIONS OF MALNUTRITION*

JULIAN D. BOYD, M.D.

Associate Professor of Pediatrics
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Iowa City

Our manner of living seldom keeps pace with scientific research; important discoveries frequently remain hidden for a generation before circumstance brings them to light and puts them to use. It is tragic that such a lag can lie between the establishment of truths which can advance human welfare, and the adoption of the new knowledge by the world at large. Nutrition is a young science, and many of its findings might remain unapplied for an indefinite period if it were not for the present national emergency. As it is, improved nutrition is essential for national preparedness. Recognition of this need has led to the calling of, first, a national conference on nutrition, and, now, of state and regional conferences designed to spread available information in the most efficient manner possible.

We are living in troubled times. Some of us can look back longingly to the "good old days", when happenings were uneventful and life seemed simple. Younger members of this group have lived their entire lives during a period of turmoil, marked by war, class strife and the shattering of tradition. We are unwilling participants in a harvest of chaos, which has resulted from the impact of modern scientific knowledge with the inertia of the past. Each of us is intensely concerned with what is going on, and with the final outcome. This concern is personal; we cannot detach ourselves from the problems of the community, of the nation, or of the world. Things which are happening will affect each of us and the succeeding generations, and there is no escape. No longer can we think of war as the problem of the soldier alone; wars now are fought through the strength, activity and morale of the civilian population, by you and by me. If the final outcome of the world struggle is to be in our favor, we civilians must use well all of our resources. It is time for us to take stock, to learn of our strengths and weaknesses, and perfect our defense and offense.

This is a time of national preparedness. This preparedness goes beyond the sinews of war; it is concerned directly with the physical fitness of every citizen. It is important that each of us reach and maintain our highest level of health and efficiency if we are to play the part that every

American should play in keeping America the land of the free. There are many things to be done, and no good citizen can escape his sense of responsibility for what is to come. You and I are to determine the pattern of the world to be, either through our strength or through our weakness.

Without wearying you with details, I want to offer you a concept of the part which proper nutrition plays in national preparedness as well as in the daily activities of life. Nutrition is something which usually is taken for granted. We do not think of food until we become hungry, and as soon as hunger has been satisfied, we feel that we are well-nourished. This concept is false; our sense of hunger or of appetite cannot be accepted as an accurate guide to our need for food, or to the types of food our bodies require. We are inclined to think that as long as we are free from apparent illness, everything is all right, and seldom are we critical of our manner of life until some illness or catastrophe proves that all is not right. We think that we are well until illness becomes obvious; we fail to heed warnings and signs which might reveal evidence of unfavorable conditions before they have led to disease. Health is somewhat like a well; we do not miss the water until the well has run dry; likewise, a lowered reserve of health frequently is not suspected until it is too late to avoid disaster.

Many disturbances of health are attributable to faults in the diet. In their most outspoken phases they may take the form of diseases such as pellagra, scurvy or rickets, or other conditions which depend on the absence of certain specific food components from the diet. Such diseases can cause incapacity or even death. Fortunately, such severe forms of malnutrition are not common in the upper Mississippi valley. The infrequency of those nutritional diseases tends to give us a sense of complacency, and the impression that such things cannot happen here. At the University hospitals we do see instances of these diseases among Iowa residents, but more frequently we see other types of malnutrition; conditions whose presence may not have been suspected, or their dependency on poor diet not have been recognized. A large portion of the illnesses which we see in children are dependent in some measure on faulty diet habits. In the course of physical examination of our patients, conditions without symptoms are discovered representing evidences of improper feeding practices. Numerous minor ailments are dependent wholly or in part on malnutrition; these include constipation, tooth decay, some forms of anemia and heightened susceptibility to infections. Some non-nutritional diseases which respond readily to treatment in the well-nourished child become

*Presented before the State Nutrition Conference, Ames, September 15, 1941.

serious events when accompanied by malnutrition and commonly progress to complications and occasionally to death.

One does not need to study a hospital population to find evidences of faulty nutrition. They are common in children and adults who ostensibly are well. Some supposedly familial peculiarities of physique, such as obesity, excessive thinness or shortness of adult stature, are due not to heredity but to habits of diet. Through changing the pattern of food habits characteristic of the household, such peculiarities may be prevented in the younger generation, even though the parents may feel that their children have been entitled through heredity to become physical misfits. Too long we have been fatalists regarding physique, failing to recognize that much can be done to offset unfavorable natural tendencies through the best use of nutritional science.

More common than any of the conditions just discussed is the state of half-health seen among people in all walks of life, who are not getting diets suited to their needs. In our own state of Iowa this may be our greatest nutritional problem: the prevalence of unrecognized faulty nutrition, which continuously and unnecessarily is sapping our health and efficiency. It is apparent in all levels of society, and it cannot be dismissed merely as a component of poverty. Its continuance cannot be attributed to scarcity or unavailability of food, but must be credited to the current complacency of mind. It is due to the prevailing impression that the person who eats regularly all the food he wants is well fed.

The nutritionist distinguishes three levels of nutrition. The poorest of these, the subsistence level, is sufficient to keep body and soul together for the time being, but it grossly fails to meet the requirements of health or disease prevention. The intermediate level merges in many instances with the subsistence level; at its best it gives the impression of satisfaction, without contributing everything that food should contribute toward well-being. This is the most prevalent level of nutrition in this state; its defects are not recognized, and its unfavorable effects are falsely attributed to other conditions. The third or highest level of nutrition is that which is ideal, or optimum; it meets the body's food needs fully, not only as to quantity but also as to nature and relative amounts of foods eaten. Only this ideal level should be considered in a campaign designed to insure physical fitness and efficiency.

Animal husbandrymen were among the first to become aware of the importance of proper nutrition. Experimental studies concerning animal nutrition have been conducted in our colleges of

agriculture for over a generation, and much of the knowledge now applicable to man has been the outgrowth of such studies. Through such pioneer effort, the farmer has become familiar with the ingredients needed for proper feeding of his livestock, and the amounts of each constituent which will give the desired result. He uses diets designed and recommended for the purpose at hand, whether that be to shorten the period of preparation for market, to increase egg production, to enhance fertility or to further the general well-being of the animal. The successful farmer uses the expert's recommendations as a means of insuring a good return for his labor. If he employed the casual feeding methods used for the ordinary farm animal, he would expect only casual results; he has come to know that only through the best feeding measures can he expect the best return.

This knowledge of scientific stock feeding has become commonplace on Iowa farms. When we visit the local and state fairs, every one of us thrills with pride at the fine livestock our state produces so consistently. However, if we size up critically the youngsters who frequently are the exhibitors of this prize stock, we may wince at the lack of similarly fine physique among our farm boys and girls. Apparently the nutritional principles used in feeding the animals have not been carried over into the feeding of children. For several years I have examined 4-H club members, and have been distressed to note the high incidence of physical defects directly attributable to faulty nutrition. In questioning the subjects as to their habits of diet, the story of poor intake of important key foods corroborated the impression of inadequacy of nutrition. On the basis of many examinations of both country and city children, I am convinced that some evidences of faulty nutrition may be considered the rule rather than the exception. This does not mean that these defects are to be considered as normal, because they are not found in children whose diet has been optimum at all times, and because through improvement of diet they may disappear or be relieved. They represent the result to be expected from casual attention to diet. Faulty nutrition in the young person may affect his physique and resistance to disease when adulthood has been reached. It may lessen his efficiency, or prove the forerunner of serious illness. Surely it plays a part in the activation of tuberculosis during young adulthood. With all the evidence at hand, we can conclude that the average Iowa boy or girl, man or woman, is in poorer nutritional condition than the individual's propensities would dictate, and that this status can be improved through better feeding habits. The findings of the draft board substantiate this belief;

we pay dearly in personnel for our previous casual regard for human nutrition. Recognizing the part current conditions may play in determining rejections, this state is enrolling a series of rejectees in special camps where they may receive proper food and supervision. It is felt that many will be reclaimed to health and will be able to contribute their full share to meeting the country's emergency. Good diet, rather than medicine, is the ingredient they need most.

It has been hard for us to come to the realization that our bodies are governed by the same biologic rules as are those of the lower animals. Our substance is derived from the foods we eat; our bodies can contain nothing other than that supplied by our foods. Our bodies are most wonderfully made; they can adapt themselves to a wide variety of nutrients, and make compromises when the diet is not ideal. Such compromises may serve to maintain life; they may be compatible with apparent health. However, frequently the body pays dearly for the compromise. Incapacity of various types may be the result; efficiency will be lowered through a poor compromise, disease will be favored, and unquestionably the life span is lessened. Use of a poor diet may be likened to the use of poor gasoline in our modern high-compression automobile engines. The machine may run, but at the expense of economy, comfort, efficiency and engine life. In contrast with the car, our bodies have no turn-in value; it pays for us to treat them with at least as great care as we would provide for a precious man-made machine. The fact that our bodies stand up as well as they do under the abuse and neglect we offer them only reflects their adaptability to adversity; it does not justify in any degree our disregard for their needs.

To carry on properly, the body must be supplied with materials for growth and repair, with products needed for the proper operation of its complex machinery, and with sufficient amounts of fuel. Nutritionists recognize several types of nutritional components, each required for some special function. For example, protein is needed for the growth and repair of muscles and of the body's organs; calcium and phosphorus are needed primarily for the building of bones and teeth; iron is required for the formation of blood; iodine for the proper functioning of the thyroid gland; various vitamins serve different specific functions in the body; in their absence these functions fail and disease results. A large intake of iron cannot compensate for a deficiency of protein, nor can an unnecessarily large dose of Vitamin D counterbalance a deficient intake of calcium. The many nutritional essentials are all available in foodstuffs: some foods are rich in one or more of these essen-

tials, though deficient in others. Some foods are low in their content of most ingredients needed for proper body building or function, and are useful primarily because they supply us with fuel. Without some knowledge of the body's exact needs, and without familiarity with the types of foods needed to meet these specific needs, it is easy to have a full stomach and yet to starve.

Certain foodstuffs are good or excellent sources of certain dietary essentials, and if they are used in suitable amounts in the daily diet they tend to protect us from what has been well termed "hidden hunger". Such foods are termed protective foods. Outstanding examples are milk, meat, eggs, vegetables, fruits, whole grain cereals and fish oils. In contrast, foods which have low protective value are the highly milled cereal products, sweets and most fats. Generally speaking, half or more of the diet should be made up from foods of the protective group; the remainder then may be chosen with safety from the sugars, cereals, starches or fats. Surveys of diets commonly used reveal that too few protective foods are eaten, because they have been crowded out by the less valuable foods. This explains the finding of malnutrition in persons who are not underweight, who have the wherewithal to get what food they need, and who do not know what it means to go hungry.

Careful studies have given us evidence as to the amounts of proteins, minerals and vitamins needed for robust health. The amounts vary with the age of the individual, his stage of development, and his manner of living. From this knowledge, and from knowledge as to the chemical composition of various foodstuffs, it is possible to design adequate diets using the foods which are commonly available in each locality. On the basis of such calculation and its verification through human feeding studies, the following may be offered as representing an adequate daily diet for the average school child: one quart of milk; one or two eggs; one medium serving of lean meat, fish, fowl or liver; two liberal servings of leafy or root vegetables; a similar amount of fruit (if possible, one or more vegetables or fruits should be served raw); a teaspoonful of cod liver oil or its equivalent in Vitamin D content; butter, cereal, bread, potatoes and sweets in amounts sufficient to satisfy the appetite, but without replacing any of the foregoing ingredients. Whole grain cereal products serve as valuable supplements to this diet. A similar diet will meet the adult's requirements equally well: the milk allowance need not exceed a pint for the person in his twenties or older.

The foregoing diet is adequate only if it is used essentially in its entirety without substitution. The milk supplies not only bone building minerals

but also about half of the protein requirement, and much of the allowance of Vitamins B and C. Whole grain cereal products provide Vitamin B complex, minerals, protein and energy. The egg and meat supplement the protein and certain of the vitamins. The vegetables and fruits contribute vitamins, minerals and roughage needed for normal bowel function. The fish oil is essential as a source of Vitamin D, which is not found in appreciable amounts in any of the other foods listed; sunlight cannot be considered as an adequate supplement many weeks of the year, under our usual conditions of life. No deficit of minerals or of vitamins should arise if the foods listed are used in the amounts indicated. Groceries, rather than drugs, can and should be used to meet our vitamin and mineral needs.

The advocacy and adoption of a proper diet have more than one economic consideration, especially in a rural state such as Iowa. If we were to eat the foods we should, the farmer's market would be considerably widened. At present, the amount of milk produced in the United States falls far short of meeting the requirement of the people if they were to use it in proper amount. Our cattle census would need to be increased from 25 million, its recent level, to 40 million, if our needs were to be met. On many farms, less milk is used by the children than by those living in our cities; the pigs fare better as to milk than the children. We might draw an example from what happened in Denmark during World War I. The Danish farmers took advantage of the high market value of butter fat and sold practically all they produced, and substituted the poor quality of oleomargarine then available in its place. This led to severe deficiency of Vitamin A in Danish diets, and in a great many children this resulted in damage to the cornea and the permanent loss of vision.

The provision of good diets rests on insight and economics. Two years ago a survey indicated that the raw ingredients for a satisfactory diet for each school child could be bought for approximately two dollars a week if foods were chosen wisely. Much of this cost can be met through home production and preservation of food. In this state particularly, the economics of good diets depend as much on wise planning as on the expenditure of funds.

What measures may be used to better nutritional practices in Iowa? Several essentials suggest themselves. First, the recognition of importance of better food must be brought to each community and into every home, and desire stimulated for each of us to reach and maintain our best level of efficiency. Second, every citizen should learn how he can meet his nutritional needs most effec-

tively with the foods he can obtain. Third, community effort should be directed toward better programs of production, preservation, distribution and consumption of protective foodstuffs. Finally, any program undertaken should be self-perpetuating; interest should not slacken until the newer concepts of nutrition have been accepted as part of our pattern of life. Each of us has a peculiar part to play in the program: the homemaker; the teacher; those concerned with food production, transfer and consumption; the physician and the other professional workers in the fields of health and public welfare; and those whom we have elected to administer our government. Certainly the problem offers a challenge to every one of us. How will it be met?

THE SOURCES OF FAILURE IN THE SURGICAL TREATMENT OF DUODENAL ULCER*†

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Dr. William A. Rohlf was an outstanding American—a pioneer among Iowa surgeons and one of her greatest. Certainly no eulogy is needed from those of us who knew him and his life so well. It is altogether fitting that this memorial should perpetuate his name and accomplishments in the community to which he devoted his entire professional life and for which he has done so much.

I was privileged to have been one of Rohlf's close friends during the last twenty-five years of his life. I have never forgotten his many acts of kindness and encouragement during my early years of practice nor his devotion and loyalty in the later years. Sincere and conscientious with his patients, a dexterous surgeon, a generous, open-hearted man, he embodied the best that one finds in a human being. I deem it a privilege and an honor to be present on this occasion and to take part in this dedication with the presentation of a paper on surgery.

Progress in fundamental surgical knowledge and technic has been marked by a progressive diminution in the number of surgical procedures used for a given lesion. Such advances have been made chiefly because of increased knowledge of physiology and pathology. Thus we know that the efficacy of our operative therapy is usually in inverse ratio to the number of fundamentally different procedures used in the treatment of a disease. Thyrotoxicosis, bile tract infections

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and carcinoma of the colon are typical examples of operative standardization. Peptic ulcer, but duodenal more than gastric, remains as perhaps the best example where standardized indications for operative intervention require specific consideration of the type of procedure to be used. That we have made considerable progress in the treatment of chronic duodenal ulcer in the past generation, particularly during the past decade, is indicated by the sharp drop in the number of operative procedures deemed physiologically sound. Pyloroplasty, simple excision, whether by knife or cautery, Y anastomosis, antero-anastomosis, sleeve and wedge resection, the Billroth I and a host of lesser known gadget-like repairs have all but dropped from serious discussion.

We may preface any discussion of the surgery of duodenal ulcer with the statement that there is unity of opinion on the surgical indications. It is the premise of this presentation that gastrojejunostomy is not only not the operation of choice for chronic duodenal ulcer, but most frequently is a poor second choice and that we have criteria which should usually enable us to anticipate in which case or cases poor results are to be expected, if this operation is used.

It is now an universally accepted view that high acid values play a dominant rôle in ulcer, that ulcers which have persisted in the presence of excessive free hydrochloric acid will heal with the complete and permanent elimination of hydrochloric acid. Whatever constitutional defect back of this lesion, as far as local conditions are concerned, this concept seems irrefutable. Patients who obtain complete and lasting surgical relief from duodenal ulcer always show two changes which affect secretory and motor functions; namely, hydrochloric acid values approximating zero and a rapidly emptying stoma. All discussion of the surgery of ulcer necessarily hinges upon these changes in gastric secretory and motor functions.

The historical antecedents of present day gastroduodenal surgery have been enumerated too frequently to need detailed recapitulation. Twenty years ago the continental group, headed by Finsterer, Haberer, Payr, Clairmont and others, advanced the premise that in too large a percentage of cases, gastrojejunostomy does not lead to the permanent healing of duodenal ulcer. In 1926 Finsterer stated that, with the exception of perforations, he had done routine resection since 1919, that in his work "gastrojejunostomy occupies a minor place"; and this at a time when resection for ulcer consisted usually in doing merely an antrectomy. American surgeons were slow in accepting Berg's theory when he stated

in 1930 that as far back as 1920 a ten-year follow-up on cases of gastrojejunostomy for duodenal ulcer showed unsatisfactory results, and that cases with this operation never measured up the standard of resected cases. In the light of our present knowledge of gastric physiology, and with the memory of the mortality rates which followed the resections of twenty years ago, this hesitation on the part of American surgeons is understandable.

The earlier proponents of gastrojejunostomy regarded it primarily as a short-circuiting operation. It was the consensus of surgical opinion in the early years of this procedure that providing a new stoma necessarily established an exit for gastric contents and acid and thus immobilized and protected the duodenum. It was generally assumed, moreover, that sufficient regurgitation of duodenal contents through the stoma provided adequate neutralization of gastric contents. For more than a quarter of a century this idea prevailed until chemical and x-ray studies of our failures showed the fallaciousness of our assumption. In fact it is only during the past decade that accumulating evidence in American literature has been compiled to show that gastrojejunostomy performed in the presence of high free-acid values carries with it a forbiddingly high percentage of recurrence of the original lesion, as well as of jejunal ulcers. During the early years of the advocacy of resection for this lesion, our literature abounded with statistical compilations contrasting the unjustifiably high mortality rate of resection with that of the conservative operation and also generally presented figures indicating that gastrojejunostomy effected a cure in 80 to 90 per cent of all cases. The chief argument in those early days was that duodenal ulcer was a benign lesion, neither requiring or justifying so serious an operation as gastric resection. When failure followed gastrojejunostomy it was regarded as no more serious than failure following medical management, and far too frequently an improperly made or improperly placed stoma was blamed for failure.

Since the advent of surgery for ulcer there has been and there still is a difference of opinion as to what constitutes a surgical cure of peptic ulcer. In formulating acceptable criteria for a surgical cure of ulcer, it would seem logical to designate as cured only those cases in which further continued medical and dietetic management was unnecessary. It would hardly seem logical even to classify as improved cases requiring alkalis, belladonna and the dietetic and physical restrictions commonly applied to the medical management of cases. That there is such an unjustifiably high

percentage of such cases in the so-called "improved" group following gastrojejunostomy (and, as has been stated before, there is a larger group than statistical compilations would indicate), and that persistently high free-acid values almost uniformly continue postoperatively, have been shown by many careful chemistry studies. Even among the group classified as "cured", who remain symptom-free, it is a matter of common observation that they frequently do so by avoiding what they regard as dietary indiscretions. Back of a certain lack of gastroduodenal stability to which gastroenterostomized patients are subject, are some interesting and pertinent facts. Fundal mucosa, the source of hydrochloric acid, is more resistant to acid than is the pyloric mucosa, and far more resistant than the duodenum; the comparative infrequency of ulcer in the fundic portion bears witness to this fact. The relatively greater ease with which non-malignant gastric ulcer yields to medical management is a further pertinent fact. On the other hand, duodenal ulcer, even the so-called uncomplicated variety, has frequently been designated as a life-long disease and when such a lesion becomes intractable through penetration, it virtually never heals until free hydrochloric acid values approximate zero, and usually not even then. This intolerance of the duodenum to acid is seen to a greater degree in the jejunum as evidenced by the fact that gastrojejunostomy performed for a mistaken diagnosis of duodenal ulcer has been followed by jejunal ulcer.

The fact that the highest percentage of satisfactory response following gastrojejunostomy for duodenal ulcer is in patients of middle and advanced years, who commonly have low acid values to begin with, is another case in point, for it is generally known that secretion of hydrochloric acid diminishes with advancing age. While gastrojejunostomy is even today commonly regarded as an adequate procedure for cicatricial pyloric stenosis, nevertheless there is a greater incidence of jejunal ulcer in such cases than following a Finsterer exclusion for an unresectable ulcer, in which latter operation, of course, a high resection is done, again emphasizing the rôle of the fundal mucosa in our surgical failures. The fact must also be emphasized that even in the presence of a stenosing cicatrix, we have no assurance of permanent healing.

Countless tabulations of gastric chemistry following pyloroplasty, gastrojejunostomy, and other so-called "conservative" procedures, as well as resection, have been made. The resection of an ulcer along with the anterior half of the pyloric sphincter cannot adequately reduce acid values if

they are high, even when the emptying time is reduced, is now a widely accepted fact. Gastrojejunostomy, though commonly lowering the acid level, still fails at reduction to a safe level. It is the failure of this operation adequately to depress the acid level that is responsible for the high percentage of jejunal ulcer in young individuals.

The facts summarized in the foregoing discussion have compelled us to recognize the direct relationship between acid and ulcer, and are responsible for the rapidly increasing trend toward resection during the past five years. In the absence of specific knowledge as to why ulcer may occur in the presence of a normal acid level, or why an individual with a high level may have no ulcer, it would seem illogical to attempt to classify the origin of the lesion as acidic or infective, to try to determine the specific form of operative attack upon such doubtful criteria.

What then should be regarded as a minimum standard for a satisfactory postoperative result? We must be able to tell the patient that his pain will permanently stop; that his bleeding will not recur; that he will be able to resume his normal physical activity without recourse to dietary regime, alkalinization or other forms of medicinal therapy. This means, barring technical error, that the original ulcer will not recur, or that the incidence of recurrence will probably not exceed one per cent, or if it is not directly removed, that it will heal, and that a new ulcer at the stoma will be a rare complication. It is recognized, of course, that a small percentage will necessarily need to follow certain physical and dietary restrictions; nevertheless, no convincing argument can be leveled against the statement that the production of a state of anacidity will most frequently assure such end results, or, stated differently, that anacidity is necessary to assure such results.

The hazards of resection are naturally dependent upon the experience of the surgeon and the physical status of the patient, and the frank admissions of high mortality rates, in one instance 18 per cent, that experienced gastric surgeons have made of their early work, are a matter of record. Present mortality rates for radical resection average from two to six or seven per cent, the average in competent hands being probably under five per cent, a contrast with Finsterer's own statement that his mortality rate before World War I, due to lack of experience, was 16.6 per cent. The fact that the time commonly required in the early years of resection ranged above three hours and now, in experienced hands, is two hours or less, and the routine use of blood transfusion, have undoubtedly been important

factors in this marked reduction in operative mortality rates. If we estimate the minimum mortality rate of gastrojejunostomy at one per cent, and this is surely well below the average, and if to this group of cases is added the mortality rate of secondary operations because of failure, then even a primary five per cent mortality rate for resection is within justifiable limits. This, of course, does not take into account a minimum mortality rate in cases treated medically, in which hemorrhage or perforation has occurred, a figure estimated by Berg at one per cent. The above reasons are primarily responsible for the now preferred position of resection by a steadily increasing number of American surgeons, slow though they were to accept this dictum from the continental surgeons almost a generation ago.

The chief hazards directly responsible for mortality are age or debility, anemia from severe or frequent bleeding, inflammatory fixation and obesity. Surgical access to the upper third of the stomach varies considerably, and when limited, may add greatly to the hazard, as may an inaccessible duodenum, and such factors must be given due consideration before resection is begun. Nevertheless, in all groups representing added hazards, the scope of resectability has been markedly advanced in the past ten years and will be further advanced in the years to come.

Gastrojejunostomy is definitely not suited for the younger age group, and the present tendency is to extend the age limits of this group. The highest percentage of failures fall in the third, fourth and fifth decades of life. At any age when the severity or frequency of hemorrhage indicates surgery, this is a dubious procedure. The small stomach and wide open pylorus are similarly associated with a high rate of failure.

Patients of advanced years requiring surgery because of intractable pain commonly have acid levels below the ulcer maximums. Such patients who, however, represent a small percentage of the entire duodenal ulcer group, may justifiably in a fair percentage of instances be considered suitable for gastrojejunostomy. Yet in this group resection is to be desired if the physical status and the experience and judgment of the surgeon justify it.

A word must be said about pyloric stenosis. During this period when resection has been progressively replacing gastrojejunostomy for intractability and bleeding, benign cicatricial stenosis is still considered by most gastric surgeons a condition requiring only a new stoma in most instances. In the older age groups and in technically difficult cases, particularly the obese, this

statement is for the most part true. In the younger age group with stenosis, particularly if the free-acid level is high, resection would seem preferable, if not mandatory, provided the hazardous difficulties previously mentioned are not present.

With technical variations, representing individual preferences which are essentially minor in scope, partial gastric resection for duodenal ulcer is a standardized procedure. By this we mean the removal of the ulcerated duodenum and at least two-thirds of the stomach. The Polya technique, or one of its modifications, is the method of choice. A mere antrectomy is not a resection in the present accepted sense. Anything less than removal of two-thirds to three-fourths of the stomach will likely fail in the desired reduction of acid level and may likewise result in too slow an emptying time, since it is well recognized that the more proximal the stoma the more rapid the emptying time. It seems highly probable that in a critical analysis of failure in resection cases it would be found that the most frequent source of persisting trouble, whether recurrence, jejunal ulcer, or merely food distress, would be due to an insufficient resection. Furthermore, it will usually be found that in the great majority of such cases anacidity will not have been obtained.

If we are to keep our operative mortality rates at a justifiable minimum, avoid technical errors contributing to defeat and assure the patient a cure, the routine observance of a number of conditions during and following operation are necessary. The preoperative passage of the suction tube, preferably past the stoma into the jejunum, should be regarded as one of the essential preoperative steps. In the event of temporary post-operative difficulty with the stoma, this procedure is as efficient as a jejunostomy.

The resectability of the ulcer itself will depend considerably upon individual technical experience. The difficulties associated with the closure of a short or inaccessible or indurated duodenal stump must be duly appraised beforehand. In cases in which the presence, location and character of an ulcer are in doubt, it cannot be too strongly emphasized that inspection of the duodenum through an adequate incision in the antrum is of utmost importance. It is as easy to overlook or fail to find a duodenal ulcer by palpation from the outside as it is to overlook a common duct stone by external palpation only. There is wide variation in the accessibility of the duodenum; an ulcer demonstrated by x-ray may be difficult to find on the table, particularly if it is on the posterior wall, where more than 70 per cent of them occur.

Furthermore, it is vitally important that the surgeon not burn his bridges by cutting across an indurated duodenum which cannot safely be closed when resection with exclusion would prove safer.

It is well known that an exaggerated notion of the amount of stomach removed will be obtained if this amount is judged by the resected distal portion. Unless one gets well up on the lesser curvature to the level of the left gastric artery, the resection will fall short. The same error with regard to the greater curvature must be avoided, for unless a corresponding amount of greater curvature, requiring an almost transverse incision, is removed, impairment of motor function with consequent slow emptying may result.

The matter of postoperative motor function must be emphasized, since one of the two objects of the operation is that of obtaining rapid emptying. The formation of a spur at the lesser curvature not only does not interfere with the function of the stoma, but is considered desirable in that it deflects contents from the proximal loop. The greater curvature must, however, join the efferent portion of the jejunal loop with no spur formation and any failure to observe this rule will slow the emptying time or form an obstruction if the spur is large enough. Postoperative fullness and distress are often due to this error, which can be avoided if the edge of the greater curvature is accurately marked, and if an accurate suture of the greater curvature edge to the jejunum is done with a safe minimum of infolding.

It seems hardly necessary to emphasize the need for fluid and electrolyte balance or the necessity for an accurate check upon intake and output. In no type of abdominal surgery is such accurate check so necessary. Blood transfusion during operation or immediately at the conclusion should be a routine measure. We believe the use of continuous suction to be very necessary, not merely for safety in the event of delay or obstruction, but also as a source of information on the function of the stoma. When the stoma functions properly, retention, even in the first forty-eight hours, will run low. Edema or spurs, particularly the latter, usually account for retention. We believe that postoperative motor failure, due to so-called atony, must be of rare occurrence. We are, however, convinced that many cases of temporary delay or block at the stoma will be found due to too much water or too much sodium chloride.

There is a wide difference of opinion in the matter of postoperative feeding. Many surgeons are still inclined to starve all postoperative abdominal cases, sometimes for as long as four or

five days. It is our very definite opinion that any postoperative patient who is hungry may be fed, within reasonable limits as to types of food, and that gastric resection is no exception to this opinion because of any danger to the suture line. In this connection a statement by Alvarez is worthy of quotation: "From what is known of the motor functions of the digestive tract, it seems probable that some paresis of the bowel and the attendant bloating seen after many operations are attributable to the usually enforced fasting with the stoppage of those swallowing movements which normally start waves moving down the bowel. In such cases a physiologist would feel inclined to urge the surgeon to try the giving of food as early as he dared, and perhaps earlier than is the custom at present. So far as I know there is no evidence to show that hunger contractions in stomach and bowel are easier on suture lines than are the contractions produced by the giving of water and soft food."

For many years we have encouraged the swallowing of water, tea, broth, thick soups or cooked cereals as early as the second day. Not only do we urge feeding by the third, or at the latest the fourth day, but we are prone to anticipate trouble when the patient shows no desire to eat or has a feeling of fullness when small amounts of food are taken. The suction tube need be left in no longer than to assure that retention will not occur. If, on the third or fourth day, retention is not in excess of 200 cubic centimeters, we commonly remove the tube. It seems hardly necessary to emphasize the need of frequent blood chemistry checks on a patient being supported by intravenous feeding.

By way of summary, it is pointed out that in the operative treatment of chronic duodenal ulcer, the goal is an acidity and a rapid gastric emptying time. Failure to obtain a surgical cure for duodenal ulcer is usually associated with the failure to obtain both of these conditions postoperatively. Used indiscriminately, or as routine, gastrojejunostomy will fail in a very large percentage of cases. Wide gastric resection, by accomplishing the goal of an acidity and rapid emptying time, in the largest percentage of cases leaves the smallest percentage of recurring and marginal ulcer, and while not routinely possible, is by far the most desirable operative procedure for duodenal ulcer. In certain case groups its use is mandatory and increasing experience and markedly lowered mortality figures have made it applicable in the great majority of cases.

VON RECKLINGHAUSEN'S DISEASE
WITH FLAT "BLADDER-LIKE" LE-
SIONS, COMPLICATED BY PAROX-
YSMS OF HYPERTENSION AND
PNEUMOTHORAX

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Briefly, this is a case of von Recklinghausen's disease in which the pigmentation is the predominate finding. The pigmentation consisted of hundreds of *café au lait* spots distributed over the entire body. There were only eight tiny neurofibromata in the skin of the abdomen and scalp. There were also six peculiar flat, bluish areas over the back of the chest in which the skin felt very thin. Soft bluish neurofibromata which can be made to invaginate have been described, but no reference to these flat, blue areas found in this case which feel simply like atrophied skin, has been found in the literature of the last ten years.

The brown pigmentation may be due to changes in the adrenal glands¹ or to some involvement of the pituitary gland. Many cases of von Recklinghausen's disease have bone abnormalities such as scoliosis and cystic hypertrophy of bones of the lower extremities.

This disease occurs in successive generations and appears to be a dominant factor in inheritance,⁵ but this is not always true. In this case there is no history of von Recklinghausen's disease in the parents or grandparents. The origin of the neurofibromata is said to be purely mesenchymal² from the tissue in the perineurium, or from the sheath of Schwann.³ The neurofibromata arise along the course of peripheral nerves, usually subcutaneously, but may arise from the nerve intracranially or intraspinally causing symptoms of brain tumor or cord tumor. Rarely they arise from sympathetic nerves. The neurofibromata are usually not painful.

There is no cure for von Recklinghausen's disease. The only treatment is local irradiation or removal of tumors causing pressure symptoms. In thirteen per cent of the cases, malignancy develops in one of the neurofibromata. When malignant, the neoplasm metastasizes late and infrequently. Pulmonary metastasis is the most frequent, but before that occurs, the patient usually dies of cachexia with infection, necrosis and local disability.

CASE REPORT

The patient, R. W., twenty-seven years of age, says his body has been completely covered with pin-head to pea-sized, light brown spots as long as he can remember. The tiny fibromata and light bluish spots, which are described below, he had never noticed. During the week previous to ad-

mission to the hospital, he had several early morning occipital headaches. Curiously enough, the patient came to the hospital because of shortness of breath with pain in his back and shoulders. This had started suddenly eight days before admission and completely incapacitated him. There were no



Fig. 1. Case of early von Recklinghausen's disease with multiple small *café au lait* spots and one palm-sized *café au lait* spot in the left scapular area.

other neurologic, gastro-intestinal, cardiorespiratory or genito-urinary symptoms. Past medical and social histories were insignificant. The father died at seventy-nine years of age of an unknown cause; the mother died at sixty-seven years of age of carcinoma of the uterus. There is no family history of tuberculosis or diabetes.

Physical Examination: The patient was a fairly well-developed, well-nourished, white male, twenty-seven years of age, not acutely ill. The skin was generally light brown and of a good tone. The entire surface was heavily covered with light brown spots (*café au lait*) one-eighth to one centimeter in diameter. Over the back of the chest there were six faintly blue areas from one-half to one centimeter in diameter, in which the skin was very thin, so that the examining finger dropped down upon the muscle or underlying tissue. In the skin of the lower abdomen there were four rubbery, firm nodules, four millimeters in diameter. There were four similar nodules in the scalp, one of which was removed for biopsy. The head was well-formed and no tenderness was present. There was some pyorrhea. Examination of the chest showed diminished expansion of one-third on the right side, and diminished breath sounds generally on the right side. There was hyperresonance in the right base.

Laboratory Examination: The blood count was as follows: red blood count, 4,200,000; white blood count, 6,200; hemoglobin, 80 per cent. The dif-

ferential count was polymorphonuclears, 85; lymphocytes, nine; eosinophils, two; monocytes, four. Five urinalyses were negative and two sero-



Fig. 2. Same case with the bluish bladder-like lesions encircled with ink.

logic tests for lues were negative. A blood sugar determination during the headache was 76 milligrams per cent. The basal metabolic rate was minus six. The spinal fluid was clear. The initial pressure was 480 millimeters with the patient sitting and the needle in the fourth lumbar space. Colloidal gold was 0-0-0-0-0-0-0-0-0-0-0-0.

Roentgenologic Examination: An x-ray of the chest revealed a right-sided pneumothorax in which the lung was one-third compressed. The heart and great vessels were within normal limits. Twenty days later the lung had re-expanded. X-ray studies of the long bones showed no pathologic changes and an intravenous pyelogram disclosed no abnormality.

Biopsy Report: Neurofibroma.

Course in Hospital: The temperature was normal, and the pulse for the most part was normal. Occasionally it was 100 and 110. The daily blood pressure varied from 130/90 to 210/100. While he was in the hospital the patient had several headaches, usually in the morning, but occasionally they would occur in the afternoon. He was on bed rest and complained that lying in bed made his headaches worse. A typical attack began about nine o'clock in the morning as he was lying quietly two hours after eating breakfast. The pain began at the back of the head, and, as it became worse, it also involved the top of the head and the back of his neck. He would hold the back of his head and rub the back of his neck in agony. After thirty to forty minutes as the headache became worse he would get out of bed and stand up regardless of our orders

to lie quietly. He claimed that standing always helped his headache, and after standing fifteen to twenty minutes, when the headache became less severe, he would go back to bed. The pain was always of equal intensity on either side of the head and was not accompanied by visual disturbances, lacrimation, vasodilatation or any other sign except hypertension. The blood pressure was always elevated to 200/100 during a headache. His usual blood pressure was 130/90. This was checked twice daily for thirty days. Adrenalin, three minimis intramuscularly, given at the beginning of an attack did not lessen the severity nor did it make the headache worse. The blood pressure was raised only twenty points momentarily. Ergotrate, grains $\frac{1}{320}$, given subcutaneously or gynergen, twenty-five milligrams intramuscularly, did not alter the course of one of the headaches. Physostigmine, grains $\frac{1}{100}$ subcutaneously, or caffeine sodium benzoate, grains seven and one-half, gave no relief in an attack. Inhaling the vapors of one pearl of amyl nitrite did not change the severity of the headaches. No localizing signs of an expanding lesion could be found. He was seen one week and six weeks after leaving the hospital and was not having headaches at that time.

Comment: This case of von Recklinghausen's disease is presented because of the unusual type of headache, associated with paroxysms of hypertension. Intracranial conditions, such as tuberculosis, feeble-mindedness etc., have been previously reported with von Recklinghausen's disease but not paroxysmal hypertension with headache. Careful study did not disclose any evidence of an intracranial lesion, nor could any other satisfactory cause for the paroxysms of hypertension be as-

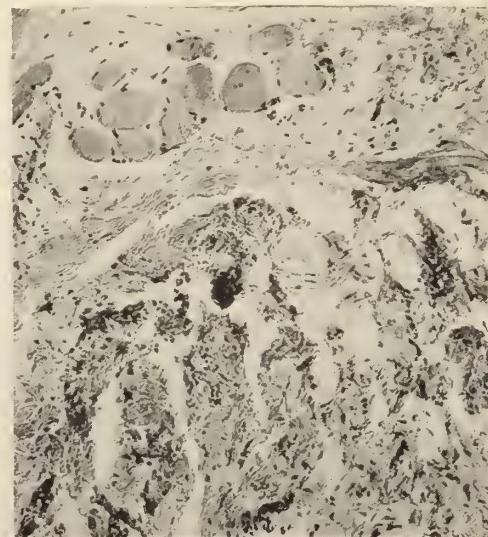


Fig. 3. Section of edge of neurofibroma removed from temporalis muscle.

signed. It is interesting to note that the small bluish or violaceous nodular skin lesions which give a bladder-like sensation on palpation due to a defect in the corium, are pathognomonic of this condition and yet are so poorly described in the various texts and in the literature.

SUMMARY

1. A case of von Recklinghausen's disease is presented.
2. A presumptive diagnosis was made because of the café au lait spots and the eight tiny tumors in the skin.
3. Diagnosis of von Recklinghausen's disease was confirmed by biopsy of a skin nodule.
4. The patient came to the hospital because of the symptoms of pneumothorax and hypertension.

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A PLAN FOR CLOSER COOPERATION BETWEEN THE GENERAL PRACTI- TIONER AND THE STATE HOSPITALS

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The mental patient is seen frequently by the family physician for some time before the behavior disorder becomes accentuated to a point where hospitalization is indicated. During this pre-hospitalization period the physician, manipulating and modifying the environment in which the illness has begun, is often able to postpone the time when hospital confinement becomes imperative. We are not concerned here with the problem of whether or not more adept handling of the mentally afflicted in this pre-hospitalization period would obviate hospital treatment. This is a moot question and more frequently the answer would probably be in the negative. The thing which does concern us here is that frequently the sending of the patient to the mental hospital is done as a last resort, when all other attempts at stopping the disease process have failed. The family physician, relieved of his responsibility of the patient's care and relieved also of the sense of frustration which is the result of prolonged care of a patient who does not respond to treatment, is only too likely to terminate his interest in the patient's illness. Furthermore, there is often a concomitant lag in his interest and concern for the difficult-

ties which the patient's stay in the hospital arouses in his immediate family.

This apparent disinterest is much easier to assume because of the fatalistic attitude popularly assumed toward state hospital confinement. The circumstances surrounding a state hospital commitment in Iowa do not permit any attitude other than that of hopelessness. The court hearing, the judicial procedure and the appearance of a trial seal the finality of a commitment. The patient seems to be paying a penalty for not being able to act and think in a manner acceptable to the rest of the community. We, the state hospital physicians, are constantly reminded of this condition by the frequency with which patients or their families turn to the legal profession for aid and advice. It is the exception rather than the rule, when the family physician requests information from us about patients in the hospital. Yet it is to him, whether he is the family physician or the local practitioner, that we could explain clearly and intelligently the mental difficulties and problems involved in the particular case. At present, however, instead of confiding the patient's problems to a professional colleague, we are often forced to write an ambiguous, if not unintelligent, note to the attorney representing the patient's family.

It is to the patient's as well as to the family physician's interest that he, the physician, should remain in close contact with the patient's course in the hospital and with the problems that this hospital stay causes in the patient's family. A fair number of patients become stationary after the acute psychotic outburst has subsided. Other patients recover entirely. These patients have to be rehabilitated, their adjustment at home has to be arranged and, at times, the home setting has to be changed to allow for convalescence outside of the hospital. It is during this period that the local practitioner may be of most value to the patient and to the patient's family. The state hospital physician does not wish to remain distant from the environment to which the patient returns. Yet the state hospital district is too large to permit a personal and intimate acquaintanceship with the patient's home situation. The local practitioner is in an ideal position to influence the adjustment of the patient, to change the patient's environment, to continue psychotherapeutic interviews when indicated and, in general, to take charge of the patient's mental health at the point where the state hospital leaves the patient who is returning home.

Let us not forget that, although he is returned to the community, the patient may often remain an invalid requiring medical supervision. This

is more evident in the case of those patients for whom a prescribed course of treatment is indicated. The epileptic patient needs his dilantin, the luetic patient requires his "shots", the diabetic patient craves his insulin, the parkinsonian patient his stramonium, the arteriosclerotic patient his nicotinic acid and the alcholic patient his benzedrine—to name just a few instances where medical supervision is essential. These patients could resume at least a partially productive existence in their communities and still continue their course of treatment with their own physician. The local practitioner who remains in touch with the patient's course in the hospital is in a better position to resume and maintain the therapeutic regime of the patient.

The mental patient will benefit in more than one way from a closer relationship between the local practitioner and the state hospital. Let us look at the problem of the patient's early release from the hospital. At best, the hospital physician can only approximate the unity, the harmony of the family, or the degree of supervision available in the home to which the patient returns. It is true that the hospital often obtains valuable information from the local welfare agencies. This source of information is, however, unavailable for families whose economic status is more secure. We cannot rely on the subjective reassurance or evaluation made by an emotionally-biased relative, nor can the attorney, who is often the intermediary, furnish us the information on which an interpretation of home factors can be made intelligently. The local doctor, integrated as he is in his community and fully aware of the implications of the mental problem in question, can furnish us the link, the basis upon which we could securely determine the prospects for readjustment and the chances for successful convalescence of the patient on his return to the community.

The state hospital must be willing to reciprocate in such a cooperative plan. The hospital must keep the family physician advised of the evaluation of the patient's problem and of the nature and kind of treatment contemplated for the patient. The clinical course, the response to treatment and any significant changes must be communicated to the family physician. The local practitioner will then be able to advise the patient's family as to why a consent for treatment is necessary, why an operation imposes itself or when a return to the community becomes advisable. The careful investigation and the rearrangement of environment often required before a patient is released should be accomplished or suggested by the local doctor who, cognizant of the motives for these plans, will be able to reassure

and educate the family to the needs of the precautions and safeguards which the hospital might require. Not only will this cooperative procedure permit the return of more patients to the community, but a more adequate follow-up and supervision of the patient will be made possible. The local practitioner may arrange for monthly or bimonthly psychotherapeutic interviews of the patient. During these interviews, changes in the mental picture will occasionally be observed and the early rectification of these changes will obviate rehospitalization. At other times, danger signals in the patient's behavior may be observed and the patient may be returned to the hospital, thereby avoiding an accentuation of the psychotic process and thus facilitating the ultimate recovery.

The closer integration of the general practitioner into the relationship which exists between the hospital and the patient's family will bring about a degree of mental hygiene otherwise difficult to accomplish. The attitude of punishment and the legal complications which are so baffling and often degrading will be lessened. The suspicion, malice and fear with which the patient's relatives regard the state hospital will be minimized. The local doctor, aware of his rôle as the intermediary between the relatives and the hospital, will thus be helped in his efforts to maintain mental hygiene postulates before his clientele and will act more frequently in harmony with the principles of preventive mental hygiene.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

RANULA

EDGAR J. CONNELLY, M.D., Dubuque

Ranula is a term used since time immemorial to designate different types of cysts which occur in the floor of the mouth. Their origin has been the subject of numerous investigations, but is still a subject of controversy. Clinically, ranula is recognized as a cyst in the sublingual area, benign in character, soft and fluctuating, painless, blue to violet in color, usually unilateral and unilocular but may be multilocular, and take on burrowing qualities. It lies above the mylohyoid muscle and produces a swelling in the mouth but may extend around the posterior border of the muscle and produce a swelling in the submaxillary region of the neck. Its wall is extremely thin and the contents consist of a clear, viscid fluid resembling the white of an egg.

CASE REPORT

Chief Complaint: The patient, a white female nineteen years of age, was admitted to The Finley Hospital on December 8, 1941, with a complaint of a "swelling in the floor of the mouth under the tip of the tongue on the left side."

Family History: The patient's father, mother and one brother are living and well. No similar condition had occurred in the family.

Past History: The patient had had all the childhood diseases and also pneumonia at the age of nine.

Present Illness: The patient first noticed a swelling under the tongue on the left side about six months before admission. It did not increase much in size during the first month. She then consulted a physician. The swelling was incised and healed but three weeks later again required incision. It healed again and then had become much larger. Recently it ruptured spontaneously on several occasions.

Physical Examination: The general examination was entirely negative. The Wassermann reaction was negative. Examination of the floor of the mouth revealed a cystic swelling in the left sublingual area, soft, fluctuating, blue to violet in color with a visible linear scar which seemed to extend into Wharton's duct. A probe could be passed into the duct on this side only as far as the scar. A roentgenogram after the injection of lipiodol revealed a cyst approximately two centimeters in diameter which extended down to the level of the mylohyoid muscle (Figure 1).

Operative Notes: Although total incision is the operation of choice as a rule, the Partsch operation was deemed advisable in this case because of the presence of the cicatricial tissue which hampered the dissection and rendered total excision difficult. One per cent novocain was injected between the mucous membrane of the mouth and the cyst wall. The overlying mucous membrane only was incised and separated from the cyst. The submaxillary duct was dissected upward. The upper portion or dome of the cyst and the superimposed mucous membrane were then removed and the cut edges of the cyst wall sutured to the cut edges of the mucous membrane. A light gauze packing was placed in the cavity.

Subsequent Course: The patient was discharged from the hospital on the third day. Subsequently the wound was kept open and the cavity gradually became smaller. The case is progressing satisfactorily to date (February 10, 1942).

DISCUSSION

Several theories have been advanced regarding the etiology of cysts classified under the term

ranula, and their origin has been the subject of considerable study. Bookman¹ believes that they are mainly retention cysts of the sublingual or submaxillary salivary glands and their ducts, or of the sublingual mucous glands. He states that when a cyst arises from the deep portion of the gland, the lower pole may present in the neck. In such a case, the posterior border of the mylohyoid muscle causes a constriction in the cyst giving it a peanut shape. In 1919, Skillern,² cited a case, apparently of this type, caused by pressure of the mylohyoid muscle with one part presenting in the mouth and the other in the submandibular region. He referred to the possibility of his case being due to a hydrops of the sublingual bursa (Fleischmann's bursa). Whether or not such a bursa exists does not come within the confines of this report. Skillern quoted a description given by Fleischmann as follows, "If from one or the other side of the frenum, one separates the mucous membrane from the tongue, one finds close to the frenum, resting on the genioglossus muscle behind the duct of Wharton and the ducts of Rivini,



Fig. 1. Roentgenogram showing ranula after injection with lipiodol.

a small mucous bursa, oval in shape, divided into cavities by partitions, the sublingual bursa, the existence of which is important to be acquainted with for a knowledge of ranula." Skillern, and likewise Lewis³ who had a similar case, are inclined to agree that some ranulae originate in the sublingual bursa as originally suggested by Fleischmann. Indeed, Skillern believes that the term ranula should be applied only to hydrops of the sublingual bursa of Fleischmann.

Thompson,^{4 and 5} in 1920, concluded that no satisfactory evidence had been presented to explain the theories thus far advanced and that a definite relationship exists between cysts of the floor of

the mouth and the submaxillary area with cysts of undoubted branchiogenetic origin and that all of them can be explained on the branchiogenetic theory. He speaks of cervical cysts (branchiogenetic), submaxillary cysts and ranulae, and believes that they are all derived from the cervical sinus which has been carried from its original position by the muscles of the branchial arches and the hypoglossal segments during the process of their migration. Carp⁶ has reported one case of ranula which was considered of branchiogenetic origin and Kini⁷ reported one of congenital ranula which may have been branchiogenetic in origin.

Blair⁸ discards the conception that ranulae are obstruction cysts of the sublingual gland and accepts Thompson's theory as broad enough to explain the different types. He states, "When you attempt to attack a ranula within the mouth and find that it extends up to the base of the skull as a parafacial cyst or that the process extends an indefinite distance into the neck or find the ranula to have a submental extension, then thinking in terms of sublingual gland will not give the right key to the correction of the surgical puzzle."

However, Fitzwilliams⁹ concludes from his studies that these cysts first form in the mouth and then extend or burrow to other regions. He states there is nothing to favor the view that Fleischmann's bursa exists and nothing to connect ranula with the supposed survival of a cervical sinus. Stein,¹⁰ recognizing the confusion of views, advocates that the term ranula be confined to a degenerative cyst formation of the salivary glands in the sublingual area. Such a cyst may result from trauma as described by Howard.¹¹

In addition to the theories already mentioned, Halstead¹² has described two other types which he also classifies as ranulae; first, epithelial cysts which are derived from the remains of the median portion of the tractus thyroglossus (duct of Bochdalec); and second, cystic accessory thyroids which develop above the hyoid bone and grow into the sublingual space.

Another type of cyst arises near the apex of the tongue on its under surface and was first described by von Recklinghausen who classified it under the term ranula. These cysts arise from the glands of Blandin and Nuhn situated at each side of the frenum of the tongue. Since they occur at the tip of the tongue, they should not be confused with the cysts arising in the floor of the mouth.

In the differential diagnoses, the following conditions should be considered: dermoid, angioma, lipoma, gumma, thyroglossal cyst, hematoma, aneurysm, suprahyoid bursal cyst, nevus, lymphadenitis, abscess and Mikulicz's disease. With adequate study these conditions can usually be differ-

entiated if each is kept in mind as a possibility.

The various types of treatment of ranula consist of simple incision with evacuation of contents; aspiration and injection of irritating chemicals; the use of a seton of silk or of a silver wire or ring; removal of the dome of the sac and cauterization of the remaining walls; destruction of the lining by means of a small needle used with surgical diathermy; the Partsch operation which consists of suturing the cut edges of the cyst wall to the cut edges of the mucous membrane, and finally complete excision either intra-orally or by means of an external incision. Recurrence is more likely to follow the simpler methods of treatment, and in such an event, the resulting cicatricial tissue makes complete excision more difficult. Complete excision, either intra-orally or by an external incision as the case may warrant, is the treatment of choice in the majority of cases.

CONCLUSIONS

A case of the most common type of ranula is reported. The several theories as to the origin of the various cysts included under the term ranula have been reviewed. The need for further and more complete studies before a satisfactory classification can be formulated is evident. The preferred treatment for all these cysts is total excision, but when this is impossible, the Partsch operation is preferable to the more simple measures which can be offered.

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STATE DEPARTMENT OF HEALTH



Active Immunization with Special Reference to Pertussis and Diphtheria

IMMUNIZATION AGAINST WHOOPING COUGH

Careful field studies have been carried out in recent years, notably by Kendrick and Elderling,¹ and by Doull, Shibley and McClelland,² to determine the degree of effectiveness of pertussis vaccine in the prevention of whooping cough.

Phase I Pertussis Vaccine

The value of pertussis vaccine as an immunizing agent resulted largely from the contribution by Sauer who emphasized the importance of using in the preparation of vaccine a potent, recently isolated strain of the Bordet-Gengou bacillus. Kendrick and Elderling have listed the following criteria for the selection of a culture suitable for making of vaccine:

1. The organism must show characteristic morphology and growth, producing hemolysis on Bordet-Gengou medium.
2. The bacillus must form a smooth colony and show agglutination in high titer with antiserum made from a "smooth", the so-called Phase I strain of Leslie and Gardner.
3. The organism must produce a satisfactory antiserum when injected intravenously into rabbits.
4. A living saline suspension of a Phase I culture must produce in the rabbit, a skin reaction leading to hemorrhagic necrosis.

Report of Recent Field Study

An interesting field study of the value of Phase I pertussis vaccine in prophylaxis of whooping cough has recently been reported by Perkins, Stebbins, Silverman, Lembke and Blum.³ Children ranging in age from six months to four years and totaling 587 were immunized with three subcutaneous injections totaling eight cubic centimeters of vaccine, or 80 billion organisms. The first in-

jection amounted to two cubic centimeters, followed at weekly intervals by a second and third injection, each of three cubic centimeters. Reactions to the vaccine were stated as negligible. A group of 699 children served as controls in this study. The period of observation of those in the vaccinated and control groups covered twenty-two months, from January, 1939 through October, 1940. Concerning factors such as age and sex, economic status of families, number in household and residential distribution, conditions were closely comparable in the vaccinated and unvaccinated individuals. Home visits were made at monthly intervals during the period, accurate records being kept of definite, suspected and "possibly subclinical" cases of whooping cough, which developed in the two groups of children. A diagnosis of whooping cough was made only when the patient coughed for fourteen days or more, suffered from paroxysms, vomited (more than one time) and had a characteristic whoop. A case was classed as suspicious when cough was present for fourteen days or more and the child had either paroxysms or vomiting, or when cough lasted less than fourteen days with occurrence of both paroxysms and vomiting.

Observed Results

1. Incidence of whooping cough.

"Among the control children there occurred 101 definite and 24 suspicious cases of whooping cough, while among the vaccinated group there were only 42 definite and 19 suspicious cases. On the basis of definite cases alone, this results in an annual attack rate of 13.3 cases per 100 children among the control group, and a rate of 5.3 for the vaccinated group. The ratio of the rate among the control group to that among the vaccinated group is 2.5. When the suspicious cases are added, the

rates become 16.4 among the vaccinated, and 7.7 among the controls, or a ratio in the rates of 2.1 to 1."

2. Relative severity of cases.

Significant observations were made with reference to severity of illness in the vaccinated and control groups of children. Sixteen per cent of the cases in the vaccinated group were moderately severe as compared with 30 per cent among the controls. Only five per cent in the vaccinated group were classified as severe, compared with 16 per cent among cases in the control group.

Summary

The recently reported field study, covering a period of 22 months and pertaining to a group of 588 children vaccinated with Phase I pertussis vaccine and a corresponding group of 699 unvaccinated children, revealed: first, an attack rate in the control group over twice as high as in the vaccinated group; and second, more severe cases of whooping cough among the unvaccinated than among children who received the preventive treatment.

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RECOMMENDED PROCEDURE FOR DIPHTHERIA IMMUNIZATION

The Sub-Committee on Evaluation of Administrative Practices of the American Public Health Association has given years of special study for the purpose of finding the most effective and satisfactory method of active immunization against diphtheria. The following paragraphs have been adapted from a recent report of this committee:

For Infants and Children Under Nine Years of Age

Material: Alum-precipitated toxoid or liquid toxoid (Ramon).

Time of Administration: Preferably at six to nine months.

Method: (1) Alum-precipitated toxoid, subcutaneously, preferably *two* treatments with an interval between of one month; or (2) liquid toxoid (Ramon), *three* treatments at intervals of one month.

Shick test three to six months after preventive treatments, to make certain of immunity.

For Children Over Ten Years and Adults

Material: Liquid toxoid (Ramon), or toxin-antitoxin (from sheep or goats).

Method: Liquid toxoid (Ramon), *three* treatments at intervals of one month, or toxin-antitoxin, *three* treatments at monthly intervals.

Shick test three to six months after preventive treatments to make sure of immunity.

PREVALENCE OF DISEASE

Disease	Jan. '42	Dec. '41	Jan. '41	Most Cases Reported From
Diphtheria	17	8	51	Black Hawk, Des Moines, Marshall Palo Alto, Polk, Scott, Wapello, Woodbury
Scarlet Fever	168	234	257	For the State
Typhoid Fever	4	3	12	Adams, Butler, Clarke, Sac
Smallpox	2	7	16	Calhoun, Henry
Measles	426	304	585	Boone, Kossuth, Butler, Carroll, Greene, Floyd, Humboldt, Marshall
Whooping Cough	85	74	80	Boone, Dubuque, Des Moines
Brucellosis	14	35	22	For the State
Chickenpox	508	411	382	Dubuque, Des Moines, Washington, Woodbury, Hardin, Black Hawk, Benton, Story
German Measles	1	4	3	Buena Vista
Influenza	7	7	2,009	Clarke
Mumps	510	303	447	Dubuque, Linn, Jefferson, Mahaska, Boone, Benton
Pneumonia	227	169	460	For the State
Poliomyelitis	2	0	2	Black Hawk, Story
Tuberculosis	18	65	40	For the State
Tularemia	2	3	6	Chickasaw, Scott
Gonorrhea	105	69	144	For the State
Syphilis	135	195	320	For the State

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ANNUAL SESSION—1942

For the ninety-first consecutive time the Iowa State Medical Society meets in annual session. The convention this year will be held in Des Moines on April 15, 16 and 17. As usual, the Program Committee has arranged a well-balanced top-notch program, well suited to meet the needs of the general practitioner and the specialist alike. Elsewhere in this issue the program is presented in detail. We should like to call your attention to some of the high spots.

On Tuesday afternoon, the day preceding the formal convention, two attractions are available for early visitors. The first is the annual "hook-'em and slice-'em" contest which takes place on the up-and-down slopes of the tricky Wakonda Club course. Play occurs during the afternoon and the "alibi and if I'd a" period begins with dinner at the club house, continuing throughout the evening, even during the presentation of prizes, a feature which we understand is of no mean proportions.

Competing with the athletic attraction, on the same afternoon, the Iowa State Pediatric Society offers a well diversified series of presentations dealing with important disturbances in children. Dr. John A. Toomey, associate professor of pediatrics, Western Reserve University School of Medicine, Cleveland, will be the speaker at the evening banquet. Dr. Toomey will talk on "Pathogenesis and Treatment of Poliomyelitis".

On Wednesday morning at 9:00 a. m. the official general session gets under way in the Main Ball Room at the Hotel Fort Des Moines. As in previous years, the society meets as a whole in the mornings and breaks up into sectional groups for the afternoon programs. We suggest you study carefully the list of guest speakers and the breadth

of subject matter their respective addresses embrace. Toomey we have already mentioned. Priestley of Rochester, Fitz of Boston, Koch of Chicago, McKelvey of Minneapolis, Hansel of St. Louis, Cubbins of Chicago and Nugent of Chicago, are nationally known authorities, and together they cover a range of subjects of vital importance to the practicing physician. The JOURNAL is happy to take this occasion to welcome our guest speakers, and to express its appreciation to these busy men who give of their time and energy to travel long distances in order that the most recent advances in medical knowledge may be shared with others for the eventual benefit of the many.

On Wednesday and Thursday afternoons the medical, surgical and eye, ear, nose and throat sections hold their special conferences. Space does not permit a detailed discussion of the wealth of material which has been prepared for these sessions, but we believe they constitute an intellectual feast which few will care to miss. Worthy of special mention are the Fracture Committee luncheons and panel discussions scheduled for Thursday afternoon. Under the direction of members of the State Fracture Committee, symposiums will be held on Fractures of the Lower Extremity, Fractures of the Hip and War Wounds and Associated Fractures.

Still another phase of this year's meeting which promises to be outstanding in excellence is the number of exhibits—commercial, scientific and motion pictures. Each of these features deserves the attention of every visitor. Not everyone realizes that scientific meetings of the scope of our annual sessions are, to a large extent, made possible by income derived from renting space to commercial exhibitors. Their continued support is dependent upon the opportunity given them to exhibit their products. For this reason, as well as for the information obtained in itself, it is to the best interest of each member present to visit the exhibits some time during his stay.

The JOURNAL is well aware that uppermost in the thoughts of everyone is the world wide conflict in which we find ourselves actively participating. Many of our members will not be available to attend the meeting, owing to the fact that they have already been called away to serve in our armed forces. Others who have had to assume increased responsibilities because of their departed confreres may find it difficult to leave. In spite of all this we believe that now, perhaps, more than in normal times, physicians need to get together. They need to exchange views, to meet in comradeship, and to move forward. Medical knowledge has never been static. It must not be allowed to become so now.

MYOCARDIAL DAMAGE FROM THE SULFONAMIDES

The wide use of sulfanilamide and its derivatives necessitates repeated caution about the toxic effect of these drugs on the human organism.

French and Weller of the University of Michigan have recently reported the presence of interstitial myocarditis following the clinical and experimental use of the sulfonamide drugs. Histopathologic studies of the heart revealed the presence of an interstitial myocarditis, rich in eosinophil cells, in 126 (55.5 per cent) of 227 patients whose sole common factor was that one or more of the sulfonamide drugs had been administered shortly before death. Excluded from the study were all cases in which there were infections which commonly resulted in an interstitial myocarditis, such as coronary thrombosis, rheumatic fever, syphilis, etc.

No macroscopic changes attributable to the use of the sulfonamide drugs were demonstrated. Microscopic studies revealed an interstitial myocarditis widely involving both auricles and ventricles, chiefly paravascular in distribution but in some cases occurring diffusely. The cellular infiltrations consisted of large mononuclear cells with granular eosinophilic cytoplasm. Some of the cells were polymorphonuclear but many appeared to be young cells of the myeloid series. Eosinophilic infiltrations were occasionally noted in the liver, lungs and kidneys.

Experimental studies consisted of the daily intraperitoneal injection into mice and rats of the various sulfonamide drugs in amounts computed to be less than the comparable human dose. Thirty-eight of sixty mice, and thirty-three of forty-seven rats revealed the same type of interstitial myocarditis on autopsy as was found in the human autopsies.

That the myocardial lesions produced by sulfonamide drug therapy are not irreparable is most encouraging, but the presence of such lesions in the critically ill patient should prompt the clinician to examine his patient most carefully for evidence of disturbance of cardiac function. The use of chemotherapy in ambulatory patients seems contraindicated by this study. The convalescence of the patient who has been given the sulfonamide drugs should be guided by the knowledge that myocardial damage may be present.

AMERICAN MEDICAL ASSOCIATION
NATIONAL CONVENTION
Atlantic City - - June 8-12, 1942

MEDICAL SERVICE PLANS*

On February 14, 1942, the American Medical Association sponsored an all day meeting in Chicago for the discussion of medical service plans. This subject has previously been one of the minor ones discussed as a part of the program of the National Conference on Medical Service. However, the movement has spread until it was felt that a full day could be advantageously spent in discussing the problems which have arisen.

There are at present three major types of plans for prepayment of medical care. The first is the cash indemnity which is usually provided by commercial insurance companies. A few employer-employee plans operate on the same principle. This type at present covers less than six per cent of the population. Cash indemnity plans pay out about \$360,000,000 annually in benefits to policy holders. The second is the group clinic or consumer type of plan. There are about thirty of these plans, caring for about 150,000 people. This plan restricts the medical participation to a small group of physicians, leaving little if any choice of physician. Several of these plans have been in operation for a number of years, and have formed a national organization which has held three annual meetings. The third type is the voluntary medical service plan, sponsored by the medical profession and operated on a non-profit basis. There are about twenty-five of these plans in operation, covering some 750,000 people.

Starting with no actuarial figures on which to base costs or services offered, the pioneer groups in this field have contributed a great deal to the medical profession in their organization. The success of the plans, and the apparent soundness of their financial set-up are a tribute to the care with which these plans have been developed. There have been few major changes in their contracts, and on the whole they are proving quite acceptable.

California Medical Service offers a complete medical care plan, coordinated with the hospital service. Some 32,000 people are covered by this contract, which includes complete medical, laboratory, surgical, x-ray, pathology, ambulance and hospital service. Payments to the medical profession caring for this group have been about sixty per cent of the ideal fee, but the program is being continued so that they can determine by further experience just what a full medical program will cost. The material from such a study will be of immense value to those who may develop similar programs in the future.

Michigan Medical Service has about 6,000 persons with full medical coverage, and a much larger

*From the Committee on Medical Economics.

number on a surgical benefit program. With increased experience over the two years of operation, this plan is gradually changing some of its benefits. They have found that whereas the various surveys have indicated an expectancy of 855 cases of illness per 1,000 of population a year, they have had 1,426 cases per 1,000 of those covered by the plan.

The Western New York plan, which was started a little over two years ago, now has 10,000 subscribers. They pay the physicians for services on a unit plan, the fees being based on those provided for under the New York Workmen's Compensation Law. Payments have ranged from 100 to 65 per cent. Of the income 75 per cent goes for payment for medical services and 25 per cent for reserves and costs of operation.

Many other plans, all quite similar, were presented. As has been the case with hospitalization prepayment projects, the various sponsoring agencies have learned by trial and error. As they have developed and exchanged experiences with one another, they have seen the need for some co-ordinating agency, which can collect data regarding the plans, and gradually correlate the material so as to be ready to give advice and assistance to the various plans and to new undertakings which may be contemplated. At present this material is being gathered by the Bureau of Medical Economics of the American Medical Association, under the direction of Dr. Leland. A committee was appointed to confer with the trustees of the American Medical Association as to the most desirable form of organization. Since this is a medical problem, to be developed and controlled by the medical profession, it was felt that its work should be in close cooperation with the American Medical Association.

There are many problems which arise in the development and conduct of prepayment plans for medical care. One of the statements in the Code of Ethics of the American Medical Association is that the financial consideration shall be secondary to the medical service and the welfare of the patient. It is with great difficulty that this principle is followed in developing prepayment plans, yet it is essential that it be kept inviolate. It was felt that the standards of medical care must be kept continually advancing, that no third party should be allowed to enter between the patient and the physician, and that free choice of physician must be allowed. Up to this time all voluntary prepayment plans have led to compulsory insurance, but none to date has been developed and controlled by the medical profession itself. This

is a great opportunity for the profession to show itself willing and able to develop plans whereby medical services may be made more easily available to the low income group. It is paramount that we do our part in moulding those changes which develop in the practice of medicine, not for the purpose of controlling the economic side of medicine, but so that we may protect that heritage of the best medical service in the world which has been handed down to the people of the United States.

NATIONAL CONFERENCE ON MEDICAL SERVICE*

The sixteenth annual meeting of the National Conference on Medical Service was held in Chicago February 15, 1942, with an attendance of well over two hundred. The entire day was spent in the discussion of the relation of medicine and the country at war.

Major Sam F. Seeley, Executive Officer of the Procurement and Assignment Service, discussed the work of that organization. In response to the last questionnaire, which was sent out through the various medical journals of the country, 52 per cent of the physicians signified their willingness to serve where needed in the armed forces of the country. Within the next two or three weeks another blank will be sent to each physician, in order to get a more accurate determination of those willing to serve, now that we are actually at war. Through this means, all of the various national services which require medical personnel will obtain their lists of physicians. Each service will notify the office of Procurement and Assignment of its needs. The office will then run the cards of the physicians through the sorting machine and send the list of those selected to the Bureau of Medical Economics. Here the names will be checked to see that no physicians are included who have been convicted of felonies or who are questionable in their practices. The revised list will then be sent to the chairmen of the individual State Medical Defense Committees who will remove those physicians who have been declared essential to the proper medical care of the civilian population. The revised list will then be sent to the service requiring the physicians and they will contact the men they need. At present the army is attempting to keep far enough ahead of the demands that any man accepted for commission can be given fifteen days in which to close his office.

*From the Committee on Medical Economics.

The Navy, the United States Public Health Service, the Veterans Bureau and other agencies handle their requirements in much the same manner. Those who have signified their willingness to serve are requested to wait until there is definite need for the type of services which they are fitted to perform, and they will be called. When the size of the army is doubled, as seems likely in the near future, there will be a demand for many physicians for the service. At present the ranks are about full. Major Seeley stated that the medical profession, through the work of the American Medical Association, has been ahead of all other professions and groups in preparing to give to the country the services needed in time of war.

In the discussion of civilian defense from the medical standpoint it was brought out that it is really essential for all communities to carry out to the fullest extent the recommendations of the national offices. In many communities these may seem to be unnecessary, but present methods of conducting warfare are such that no one knows where it may strike next. The central portion of the country is a storehouse of food and industrial supplies, and in case of attack, with modern aviation, would not be immune because of distance from the coasts. Every community should have its medical, hospital and first aid personnel prepared in advance, so that there will be no "Pearl Harbors" possible in any part of the nation. We should all personalize our responsibility, and see that we are doing our bit, rather than criticize those who seem to have been negligent in their duty.

The rôle of the state medical society and the duties of the state and city health departments were discussed at length. It is the duty of the state medical society to integrate the work of the various county and local units. One of the most important services is to see that, with the dislocations occurring in civil practice, the medical profession maintains the high quality of medical care now available. The state health departments have a much enlarged field in the environmental protection especially in those areas where defense plants have made great changes in population. The provision of a safe water supply, disposal of sewage and waste, and the prevention of the spread of communicable diseases are tasks which have been more than doubled. The transportation of large groups of men, both military and civilian, tends to introduce various diseases in areas where they have not previously existed. The city health departments have much the same problem as the state, and in addition have a large share in the

activities of the organizations providing for civilian defense.

The possibility of the rehabilitation of rejected selectees has been discussed much in professional ranks and in the newspapers. Approximately 30 per cent of those examined were rejected and 32 per cent were placed in the limited service group. Most of these men were able to carry out useful civilian occupations but were not up to the high standards demanded by the army. In round numbers fifteen per cent were rejected for faulty vision, ten per cent for unsound teeth, nine per cent for defects of the extremities, eleven per cent for heart and circulatory defects and six per cent for mental and nervous diseases. These rejections can be classified in four groups; first, developmental defects; second, traumatic defects; third, diseases for which cause and treatment are not known; and fourth, neglected defects and diseases. For most of the first and second groups, and for all of the third group, remedial care is not possible. Only in the last group can any large percentage be made available for defense service in the armed forces. It is noted that the percentage of rejections increases with each year of age. In the group under twenty-five years of age, rejections were 41.36 per cent in the New York area, while in those over thirty-one years of age 64.09 per cent were rejected. A similar variation is expected in the new registrants of February 16, with increased rejection in the older group, and decreased rejection in those under twenty-one years of age. With the increased need for men in the armed forces some of the requirements are being made less strict, and men with certain defects are to be used in non-combatant service. Many of those whose defects can be remedied will then be fit only for definite and limited types of military service.

Lieutenant Colonel Joseph R. Darnall of the Medical Corps explained fully the needs of the army for trained medical personnel. During peace times 4.85 per cent of the enlisted strength is assigned to the medical corps, but in time of active war this increases to 7.5 per cent and during actual combat it may be much higher. The medical units of the army are many, and each has a definite part in the care of the soldiers. The military hospital, fixed and mobile, requires 56 medical officers for each 1,000 beds. In addition there must be a corps of nurses and some 500 enlisted men. The military dispensaries, or outpatient services, care for many conditions not requiring hospitalization, and during combat become field stations. Further medical personnel is engaged at the area headquarters,

training areas, and in the army and navy medical, dental and veterinary schools. Aviation medicine is becoming a special branch and both the army and navy have special schools for training in this branch of medicine.

The rigors of the service in general are such that it is essential to have younger men wherever possible. Each 1,000 men in the army, during war time, require the services of 6.5 physicians, 1.5 dentists and 0.75 veterinarians. With the new demands of the increased army, many younger men, and a few older ones, will be drawn from the medical profession. The chief obligation of the older men in practice is to expand their activities, and carry on the work with the civilian population until such time as the younger men can return from the army to their practices.

The future supply of men for the medical, dental and veterinary professions, both in and out of the armed forces, is of great importance. With the withdrawal of many men from active civilian practice, it is essential that the supply of new men be maintained at a high level. In order to assure this the army and navy have cooperated with the medical, dental and veterinary schools. It is anticipated that, beginning with this spring, all medical schools will go on a twelve-month schedule, so that a student starting as a freshman will finish in thirty-six months, with no long vacations. He will then complete one year's internship and be ready for either military or civilian service. To assure that he may continue in his studies, without being taken out under selective service, he may enlist in the Medical Administrative Corps or in the Naval Reserve and receive a reserve commission. As long as he continues in his professional studies he will be exempt from selective service, but as soon as he has completed his service as an interne he will be given a commission and at once be available for military service.

The one principle which has been stressed by the medical profession and the medical corps of the army and navy is that this acceleration of training shall not in any way decrease the grade of medical teaching, nor detract from the completeness of the courses offered. It will mean much more work for the medical teachers, and will demand changes in internships to accommodate the new classes coming out every nine months, but this is one great service these organizations and individuals can give to the country.

As we read the papers and magazines, listen to the broadcasts, and talk with our friends we see and hear a great deal of critical discussion. Criti-

cism is valuable, and we hope it will always be permissible in this country of ours. However, in the present emergency, let us make our criticism constructive. The medical profession is playing a great part in this crisis. If we will learn more of the work of the medical profession in civil defense, and become conversant with the medical work of those in the armed forces, we will be much less critical. There is work for all of us to do; the more we knuckle down to the job at hand, the better we will do it, and the sooner we will be able victoriously to complete our conflict, and return to normal peaceful pursuits.

THE SECOND AMERICAN CONGRESS OF OBSTETRICS AND GYNECOLOGY

The medical care of civilians must continue on its usual high plane, and practicing physicians must have opportunities to keep abreast of the more recent developments in medicine. The annual two and one-quarter millions of babies will be born during the war years and there may even be an increasing birth rate. For these very cogent reasons, the American Committee on Maternal Welfare has decided to continue with plans for the Second American Congress of Obstetrics and Gynecology which is scheduled to be held in St. Louis, on April 6, 7, 8, 9 and 10, 1942. The program is now well along to completion and offers many new features which should be attractive.

Subjects of special interest to specialists, general practitioners, nurses, public health officers, hospital administrators and educators will be presented, so that all those concerned with the care of obstetric or gynecologic patients will be able to profit from presentations by recognized authorities. Formal addresses are to be delivered on the following subjects: Obstetric Use of Vitamin K; How to Meet the Needs Arising from National Defense; Chemotherapy; Genital Infections; Endocrines; Teaching the Nurse to Teach the Patient; Maternity Hospital Management; Biological and Medical Applications of Nuclear Physics; Shock and Hemorrhage; Control of Eclampsia; Genital Cancer; Sterility and Infertility; and Economics of Obstetric Care.

In addition to regularly prepared papers and symposiums on many important, clinical topics, every effort has been made to personalize and practicalize the program. There will be three "Obstetric Information Please" sessions on live subjects with well-known experts at the mercy of the audience. There will be daily demonstrations on forceps application, breech extraction, home

delivery and infusions and transfusions. Through the cooperation of forty-eight obstetric specialists and six experienced nurses, individual, fifteen-minute consultations on pressing problems of practice will be available to 288 physicians and to 36 nurses on an appointment basis. Twenty medical and two nursing round table discussions will be held. Topics to be discussed in the obstetric and gynecologic round tables will include: X-Ray Pelvimetry; Treatment of Prolonged Labor; Pyelitis of Pregnancy; Retrodisplacements of the Uterus; Erythroblastosis; Obstetric Analgesia; Total Versus Subtotal Hysterectomy; Treatment of Fibroids; Cesarean Section; Infiltration and Block Anesthesia; Problems of Adolescence; Asphyxia and Anoxia; Problems of Menopause; Prevention of Obstetric Infection; Treatment of Abortion; and Treatment of Genital Prolapse.

The program has been "streamlined" to meet the needs of all groups, and the response should be good. Make your plans now to attend and encourage your friends in interested groups to do likewise. The five days or less, if you cannot remain away for the full session, will prove stimulating and informative. Further information and application blanks (the registration fee is five dollars) can be obtained by addressing the American Committee on Maternal Welfare, 650 Rush Street, Chicago, Illinois. Make your hotel reservations early. The Jefferson Hotel has been designated as headquarters for the physicians.

PHYSICAL THERAPY SECTION MEETS

The Midwestern Section of the American Congress of Physical Therapy will hold a one-day meeting at the University Hospital in Iowa City, Monday, April 6. Included on the program will be the following papers:

- Hypothermic Anesthesia in Extremity Surgery
Max K. Newman, M.D., Detroit, Michigan
- The Rationale of Oxygen Therapy during Hyperpyrexia
Stuart C. Cullen, M.D., Iowa City
- The Treatment of Acute and Subacute Poliomyelitis
Arthur Steindler, M.D., Iowa City
- Relation of Physiotherapy in War Time
Guest speaker to be announced later

All doctors and technicians interested in this field are cordially invited to be present for the meeting. Further information may be secured from Dr. W. D. Paul, University Hospitals, Iowa City, Iowa.

IOWA STATE PEDIATRIC SOCIETY PROGRAM

The Iowa State Pediatric Society will meet on the afternoon and evening of Tuesday, April 14, preceding the Annual Session of the Iowa State Medical Society. Visitors are cordially invited. The tentative program is as follows:

Tuesday Afternoon, April 14

- | | |
|--|---------------------------------------|
| Cabin—Hotel Fort Des Moines—1:30 p. m. | |
| 1:30 Neuronitis..... | Mark L. Floyd, M.D., Iowa City |
| 2:00 Medical Treatment of Pyloric Spasm and Pyloric Stenosis | Robert O. Hughes, M.D., Ottumwa |
| 2:20 Fluid Therapy in Pediatrics..... | Charlotte Fisk, M.D., Des Moines |
| 2:40 Scurvy..... | Robert H. McBride, M.D., Sioux City |
| 3:00 Pediatrics, Past and Present..... | Martin D. Ott, M.D., Davenport |
| 3:20 Intermission | |
| 3:40 Metabolic Changes in Adolescence..... | Philip C. Jeans, M.D., Iowa City |
| 4:00 Keeny Treatment of Acute Poliomyelitis..... | James E. Dyson, M.D., Des Moines |
| 4:20 Extensions from the Primary Complex in Tuberculosis | Dennis H. Kelly, M.D., Des Moines |
| 4:40 Newer Prophylactic Measures* | John A. Toomey, M.D., Cleveland, Ohio |

Tuesday Evening, April 14

Banquet—Des Moines Club—6:00 p. m.

Address: Pathogenesis and Treatment of Poliomyelitis..... John A. Toomey, M.D.
Assistant Professor of Pediatrics, Western Reserve University, School of Medicine, Cleveland, Ohio.

*Tentative

IOWA STATE MEDICAL GOLF TOURNAMENT

The Eighth Annual Tournament of the Iowa State Medical Golf Association will be held Tuesday, April 14, at the Wakonda Club in Des Moines. Play will begin at one o'clock in the afternoon. This course is without doubt the finest and sportiest in the state of Iowa. Dinner will be served in the evening, and prizes will be awarded. If the donations of prizes are as generous this year as they were in 1941, every one should receive a suitable prize for his efforts in addition to having a most pleasant afternoon (unless he spends too much time in the rough and sand traps).

Those players who have been more or less regular attendants the past several years are urgently requested not only to attend this year but to bring as many friendly "medics" with you as possible. It is the hope of your officers and the local committee that this year's tournament will be the best yet.

Charles A. Nicoll, M.D.
Panora, President

John H. Matheson, M.D.
Des Moines, Secretary.

Medical Preparedness*

PERSONNEL OF THE IOWA COMMITTEE ON PROCUREMENT AND ASSIGNMENT

Dr. Thomas F. Suchomel of Cedar Rapids has been appointed by the Honorable Paul V. McNutt to act as chairman of an Iowa Committee on Procurement and Assignment. To aid him in this work Dr. Suchomel has appointed the following persons:

M. C. Hennessy, M.D., of Council Bluffs
 C. S. Foster, D.D.S., of Cedar Rapids
 A. R. Menary, D.V.M., of Cedar Rapids
 E. M. MacEwen, M.D., of Iowa City
 T. P. Sharpnack of Des Moines
 Vera Sage, R.N., of Des Moines

PROCUREMENT AND ASSIGNMENT SERVICE FOR PHYSICIANS, DENTISTS AND VETERINARIANS

The Directing Board of the Procurement and Assignment Service, through the Committee on Information, has drawn up pertinent information regarding the organization and functions of the Procurement and Assignment Service. All of this material was carried in the February 21 issue of the *Journal of the American Medical Association*. The JOURNAL OF THE IOWA STATE MEDICAL SOCIETY has already carried much of this information, but the following excerpts contain new and important facts.

LOCATION OF OFFICES

Central Office. The accompanying chart shows the organization of the Procurement and Assignment Service. The executive officer is Sam F. Seeley, M.D., M.C., U. S. Army. The central office is located at 601 Pennsylvania Avenue N.W., Washington, D. C. To facilitate correspondence, all communications should be addressed to the central office.

Consultant Office. A consultant office has been established in the headquarters of the American Medical Association, 535 North Dearborn Street, Chicago, under the supervision of Dr. R. G. Leland, where special information regarding physicians is maintained. Similar information regarding dentists is available at the headquarters of the American Dental Association, 212 East Superior Street, Chicago, and regarding veterinarians at the headquarters of the American Veterinary Medical Association, 600 South Michigan Avenue, Chicago. These facts include those supplied di-

rectly to the organizations concerned, the classifications developed by the special committees of the Division of Medical Sciences of the National Research Council and confidential information supplied by other agencies.

THE NATIONAL ROSTER

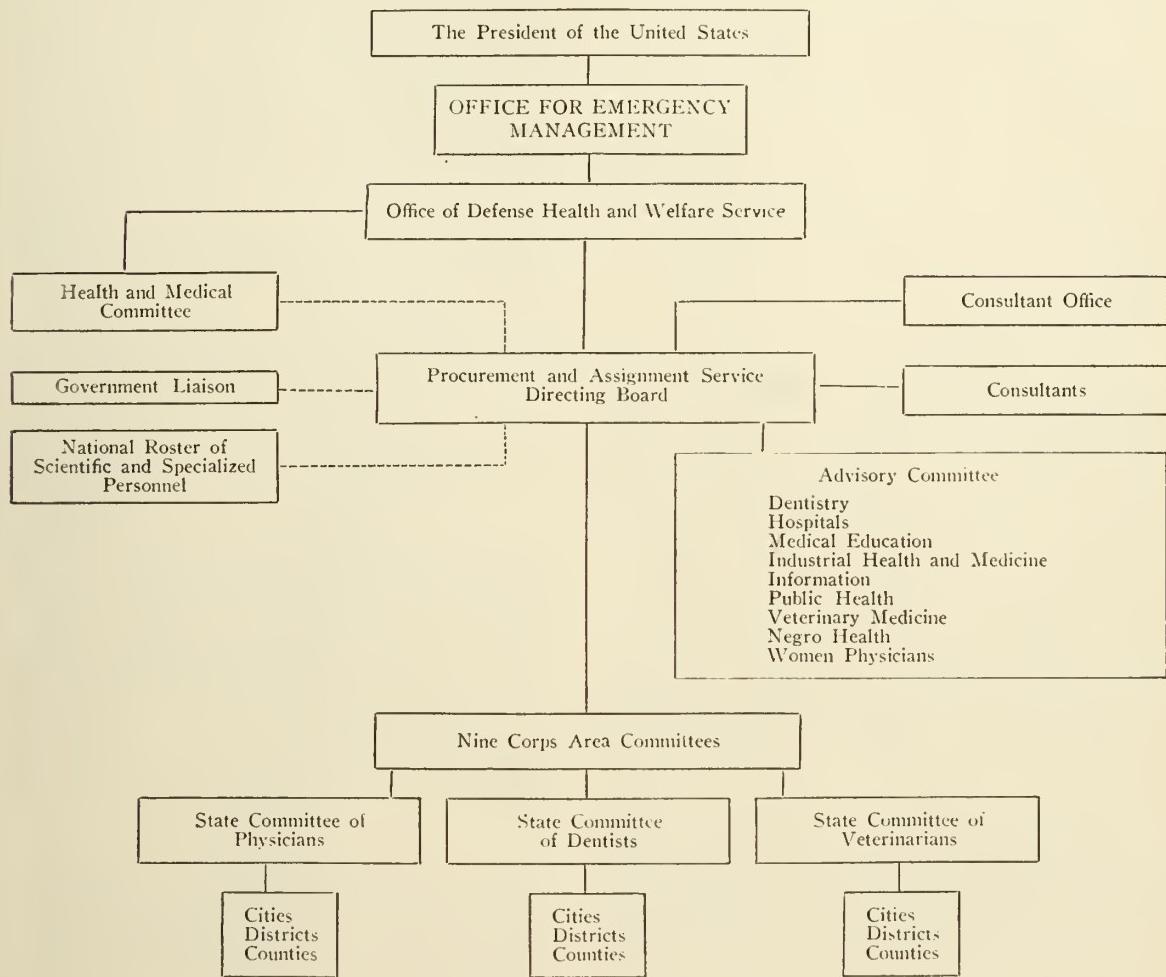
The National Roster of Scientific and Specialized Personnel was created by executive action in July of 1940 as an office within the Executive Office of the President to be jointly supervised by the National Resources Planning Board and the United States Civil Service Commission. Two primary functions were assigned to the Roster: first, the formulation of as complete a list as possible of all of the United States scientifically and professionally trained citizens; and second, the development of proper procedures for the most effective utilization of the skills of these citizens in connection with defense and other governmental and national needs. In pursuance of this directive, the Roster has established a completely analytical punch-card list of the names, locations, and qualifications of the country's specially trained individuals in more than fifty strategic scientific and professional fields. Because of the fact that the American Medical Association was engaged in developing its own roster, the National Roster did not undertake to include any but a small specialized group of the general medical profession. It became necessary therefore to work out an agreement of cooperation between the National Roster and the Procurement and Assignment Service so that the latter could have the benefit of the Roster's experience and facilities in maintaining up-to-date lists of physicians, dentists and veterinarians. By special action of the boards of trustees of the American Medical Association, the American Dental Association and the American Veterinary Medical Association, all punch-card files in the possession of these associations were made available to the National Roster.

By these joint efforts, the Procurement and Assignment Service will have available in the National Roster at Washington complete records of all material submitted by the professions. The professions in turn will have the benefit of material collected through the roster for their own punch-card files at their national headquarters.

A consultant committee to the National Roster for medicine includes Drs. Morris Fishbein, R. G. Leland and Olin West.

*From the Committee on Medical Preparedness.

ORGANIZATION OF THE PROCUREMENT AND ASSIGNMENT SERVICE

SPECIAL ENROLMENT FORM AND QUESTIONNAIRE
FOR PROCUREMENT AND ASSIGNMENT SERVICE

The Procurement and Assignment Service, co-operating with the National Roster of Scientific and Specialized Personnel, has prepared special questionnaires for circulation to every physician, dentist and veterinarian in the United States. This questionnaire will come directly to all physicians, dentists and veterinarians as soon as possible after the National Registration on Feb. 16, 1942. *Every physician, dentist and veterinarian, regardless of age, sex, physical condition, citizenship or employment should fill out and return the enrolment form and the questionnaire.* Those physicians, dentists and veterinarians who have been commissioned in any United States service previous to the receipt of the enrolment form and questionnaire should so indicate under the heading "remarks" on the enrolment form.

The original questionnaire and enrolment forms previously circulated by the American Medical

Association, the American Dental Association and the American Veterinary Medical Association are being utilized to meet requisitions from the armed services and other agencies, until the National Roster is complete and the Procurement and Assignment Service is working routinely. The additional information secured by the special questionnaire now to be described will bring up to date the facts necessary to place each physician, dentist and veterinarian in the work for which he is best qualified.

Roster Questionnaire. The questionnaire, as developed, includes space on which the physician, dentist or veterinarian will supply the usual data regarding name, address, date and place of birth, citizenship, marital status, race and sex, school of graduation, previous military service in the United States or in the armed forces of other countries, membership in the reserve corps or commissions in any branch of government service. Any additional information regarding special aptitudes,

such as knowledge of aviation, radio or cryptanalysis, which might be of value, knowledge of foreign languages and foreign travel will also be included. Again, it should be emphasized, this information is sought to supplement information previously supplied on questionnaires. It is recognized that the status of any physician, dentist or veterinarian may have changed materially since the time when previous questionnaires were submitted. The new questionnaire will also be tabulated in a special punch-card system which will be coordinated with the punch-card systems previously mentioned.

In the new questionnaire, opportunity is also given to state in detail appointments held in various local, industrial, state or governmental agencies, in civil practice, and in education and research. Specialization is recognized by appropriate designations which coordinate with certification of specialists by the certifying boards and also with appointments on the staffs of hospitals and other indications of special practice.

The method of practice, whether individual, in partnership or in groups is indicated. Finally an opportunity is given to every physician, dentist and veterinarian to indicate his preference as to the type of service which he will be capable of rendering to the United States during the war.

The Enrolment Form. On the enrolment form which comes with the questionnaire the physician, dentist or veterinarian voluntarily enrolls himself with the Procurement and Assignment Service. He indicates his first, second, third and fourth preferences of the military, governmental, industrial or civil categories that may require his assistance.

Announcement will be made repeatedly in medical, dental and veterinary medical publications of the time when the circulation of the enrolment form and the questionnaire begins. When you receive your enrolment form and questionnaire, *please act promptly*. Those who fail to receive an enrolment form and questionnaire are requested to write to the National Roster of Scientific and Specialized Personnel, 916 G Street N.W., Washington, D. C., within six weeks after announcement has been made that the circulation has begun.

CERTIFICATE AND INSIGNIA

Physicians, dentists and veterinarians who enroll with the Procurement and Assignment Service will receive a numbered certificate indicating that they have made themselves available and will be privileged to wear insignia indicating that such enrolment has been made.

PROCEDURE TO MEET PRESENT NEEDS

The present Army and Navy needs are for physicians under 36 years of age. Those under 36 desiring immediate commission may write now to the Procurement and Assignment Service, 601 Pennsylvania Avenue N.W., Washington, D. C. Their letters will be treated as applications and those who are qualified will receive proper application forms with view of commission in the Army or the Navy. All physicians over 36 and all dentists and veterinarians should await the receipt of the enrolment forms.

METHODS OF ACTION OF THE PROCUREMENT AND ASSIGNMENT SERVICE

By authority of the President, the Procurement and Assignment Service receives requests for personnel from the following governmental agencies:

MEDICAL

- United States Army Medical Corps.
- United States Navy Medical Corps.
- United States Public Health Service.
- United States Veterans Administration.
- United States Civil Service Agencies.
- St. Elizabeth's Hospital (Washington, D. C.), Resident Staff and Interns only.
- United States Indian Service.
- Panama Canal Service.
- Office of Civilian Defense (full time).

DENTAL

- United States Army Dental Corps.
- United States Navy Dental Corps.
- United States Public Health Service.
- United States Veterans Administration.
- United States Indian Service.
- Panama Canal Service.
- Office of Civilian Defense.

VETERINARY

- United States Army Veterinary Corps.
- United States Navy Hospital Corps Specialists.
- United States Public Health Service.
- United States Bureau of Animal Industry.
- Federal Extension Service.
- State Extension Service.
- United States Department of Agriculture Marketing Service.
- War Department (Federal Civil Service Status—not Army).
- Federal Agricultural Experiment Stations.

The Procurement and Assignment Service is also charged with the stimulation of voluntary enrolment, having due regard for the over-all health needs of the nation, including the personnel of civilian institutions.

When a request is received from a federal agency for medical, dental or veterinary person-

nel, the names of those who are qualified to meet the specifications established by the requisitioning agency, who are available and who have indicated by enrolling with the Procurement and Assignment Service, their willingness to apply for a commission or employment, are supplied by the National Roster, utilizing the punch-card system previously described. These names are arranged in lists by states. A copy of each list is forwarded to the Consultant Office of physicians, dentists or veterinarians respectively, where each is made more accurate by the elimination of the names of those who do not qualify in view of the special information held in the Consultant Office. These lists are then referred to the state chairmen, who make a decision as to the immediate availability of the physicians, dentists or veterinarians concerned. Such a step is necessary because the availability of the individual may have changed in the period between the return of the official questionnaire in March 1942 and the time when the physician, dentist or veterinarian is notified of the need for his services. The lists are then forwarded by the state chairmen to the Procurement and Assignment Service in Washington.

From these lists the central office obtains the names of those individuals who have thus been found qualified and available.

PHYSICIANS, DENTISTS OR VETERINARIANS FOR THE UNITED STATES ARMY MEDICAL DEPARTMENT

The procedure with reference to supplying personnel to the United States Army Medical Department is in summary as follows:

1. The Surgeon General requisitions needed personnel from the Central Office of the Procurement and Assignment Service.
2. The National Roster prepares an appropriate list of names from the National Roster of Scientific and Specialized Personnel.
3. The National Roster sets aside the cards from the file of those available.
4. This list is forwarded to the Consultant Office, Procurement and Assignment Service.
5. The Consultant Office forwards the names to the chairmen of relevant state committees of the Procurement and Assignment Service.
6. These chairmen forward to the central office the list they received, with names of unavailable (essential) persons indicated.
7. The Central Office mails application forms and authority for physical examination to the qualified and available proposed applicants.

8. Each applicant applies for "final type" physical examination at the nearest Army post.

9. The examiner sends the report to the Surgeon General's Office.

10. The applicant returns his completed application blank and supporting papers direct to the Central Office of the Procurement and Assignment Service.

11. The Central Office forwards the application form and the supporting papers direct to the Surgeon General.

12. The Surgeon General's Office joins the completed application blank, supporting papers and the corresponding report of physical examination.

13. The Surgeon General's Office determines whether or not to recommend the applicant to the Adjutant General on the basis of physical and professional qualifications.

14. The Adjutant General notifies the applicant that he has or has not been appointed.

15. The Central Office of the Procurement and Assignment Service is notified whether the applicant has been, or has not been, appointed.

16. The names of those not commissioned are again placed in the file of the National Roster so that the persons affected may be available for other service.

NOTE—After the applicant has sent his application form and supporting papers to the Central Office of the Procurement and Assignment Service, he may expect his further correspondence to be carried on with the Surgeon General's Office or the Adjutant General's Office.

PROVISION OF PHYSICIANS AND DENTISTS FOR THE UNITED STATES NAVY MEDICAL AND DENTAL CORPS

When a request is received from the United States Navy Medical or Dental Corps for personnel, the same procedure will be followed in securing lists of names as has already been described in the previous section regarding the provision of personnel for the Army.

DEFERMENT FOR STUDENTS

The Secretary of the Navy recently approved a change in navy regulations whereby it is now possible for persons who have been accepted for entrance in the next entering class and all medical students in Class A medical colleges and approved dental colleges to be appointed in the United States Naval Reserve with the commission Ensign H-V (P), provided they meet the physical and other requirements for such appointment. It should be noted that this applies not only for persons holding

letters of acceptance and freshmen and sophomore students in these medical and dental schools but also juniors and seniors.

The Secretary of War has recently approved a change in army regulations which authorizes the commission as Second Lieutenant, Medical Administrative Corps, Army of the United States, of all students in Class A medical colleges and to those persons who have matriculated in these colleges, providing they meet the physical and other requirements for such appointment. It should be noted that this opportunity includes freshmen and sophomores as well as juniors and seniors.

SPECIAL INFORMATION

Specialization. In general, determination as to special qualifications of persons entering the medical services of the Army and Navy depends on the classification of specialists by advisory committees established through the Division of Medical Sciences of the National Research Council and certifications of boards in the various specialties. Moreover, the recommendations of state and county committees and the statements of the individuals on questionnaires will be taken into consideration.

Citizenship. Regulations of the United States Army and Navy do not permit the commissioning of officers who are not citizens of the United States. A commission in the United States Navy requires full citizenship for a period of ten years, and the ten year period to have been spent in the United States. Similarly, all federal agencies utilizing physicians, dentists and veterinarians now demand citizenship as a prerequisite to such enrollment.

Persons who do not possess full citizenship papers but who have been licensed to practice in any of the states of the United States should enroll with the Procurement and Assignment Service so that their services may be utilized when the opportunity arises. They should, however, do their utmost to continue in their efforts to secure citizenship to enable them to qualify for positions that they are not able to fill because of lack of these essentials.

Physicians, dentists or veterinarians who have their first citizenship papers but who do not have a license to practice and who are under the age of 45 come within the provisions of the Selective Service acts and may be inducted in the capacity of enlisted men. When this occurs, these should make known their special capacities, so that their services may be utilized to the fullest extent in the medical departments of the Army and Navy in an enlisted capacity.

Women Physicians, Dentists and Veterinarians. The United States Army and Navy do not permit the commissioning of women physicians, dentists or veterinarians. However, all should enroll with the Procurement and Assignment Service so that they may be recommended to such positions as are available in other federal agencies, industry or civilian capacities in which their services may be required.

The needs will no doubt be particularly acute in local, state and national institutions, in teaching and staff positions and in special occupations with the Office of Civilian Defense in the care of women and children under emergency conditions.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Board of Trustees February 6, 1942

The Board of Trustees of the Iowa State Medical Society met in the central office at 9:00 a. m. Friday morning, February 6, 1942, with the following persons present: Trustees Oliver J. Fay, John I. Marker and Lee R. Woodward; Robert L. Parker, secretary, Lee F. Hill, editor, and Channing G. Smith, Medical Consultant for the State Board of Social Welfare.

Business transacted was as follows: minutes were read and approved; Dr. Smith reported on the progress of the Medical Economics survey; matters pertaining to the JOURNAL were considered; and bills, routine and special, were authorized. Meeting adjourned at 10:30 a. m.

Meeting of the Committee on Constitution and By-Laws February 8, 1942

The Committee on Constitution and By-Laws of the Iowa State Medical Society met in the central office Sunday afternoon, February 8, 1942, at 1:30 p. m. Dr. John H. Henkin, Dr. Bush Houston and Dr. William L. Alcorn were present. The request of the House of Delegates for clarification of the ruling regarding life membership was considered and a new amendment formulated; other changes to the by-laws were also discussed. Meeting adjourned at 2:30 p. m.

Meeting of the Finance Committee February 19, 1942

The Committee on Finance of the Iowa State Medical Society met in the central office Thursday, February 19, at 1:00 p. m. and made its annual audit of the books of the Society. All three members were present. They are: Drs. E. C. McClure, A. S. Bowers and H. A. Tolliver. Upon finding all items correct, the committee adjourned at 3:00 p. m.

SPEAKERS BUREAU ACTIVITIES

NEW SCIENTIFIC RECORDINGS

We feel exceptionally fortunate in being able to offer two additional recordings for the use of Iowa physicians. Dr. William P. Murphy of Boston, world renowned for his work on anemia, has been kind enough to send a manuscript of his recent talk, together with slides, on the macrocytic anemias. This recording is now completed and ready for use. Dr. Jerome R. Head, Assistant Professor of Surgery at Northwestern University Medical School, who has had a vast experience in injuries of the chest, likewise favored us with a manuscript for recording purposes. This lecture clearly covers the subject of chest injuries, which is becoming of more and more importance. His methods of treatment in the main are simple and the indications clearly defined. We feel that these two lectures contain a great deal of interest and value to the practicing physician. You

may write the Speakers Bureau at the state medical office if you are interested in hearing either or both of these recordings.

RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

March 4-6	Farm Accidents	R. I. McGilvra, M.D.
March 11-13	Accidents in the Home	J. F. Veltman, M.D.
March 18-20	An Adequate Diet	R. J. Porter, M.D.
March 25-27	Health, Strength and Beauty Health Essay Contest Winner	

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF MARCH

Marshalltown Hotel Talcorn 6:30 p. m.	March 3	Diagnosis of the Commoner Skin Diseases Frederick R. Schmidt, M.D., Chicago
Grinnell Hotel Monroe 6:30 p. m.	March 10	When Bobby Goes to School—Sound Movie discussed by Philip C. Jeans, M.D., Iowa City
Jefferson Greene County Hospital 6:30 p. m.	March 19	Head Injuries* Hans H. F. Reese, M.D., Madison, Professor of Neurology and Psychiatry, University of Wisconsin Medical School
Boone Hotel Holst 6:30 p. m.	March 20	When Bobby Goes to School—Sound Movie discussed by Lee Forrest Hill, M.D., Des Moines

(*) Tentative

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF MARCH

Cedar Falls Sartori Hospital 6:30 p. m.	March 3	Care of the Premature Infant Julius H. Hess, M.D., Chicago
Atlantic Atlantic Hospital 6:00 p. m.	March 12	Diseases of the Gallbladder R. Russell Best, M.D., Omaha

WOMAN'S AUXILIARY NEWS

MRS. H. I. MCPHERRIN, Chairman of Press and Publicity Committee
5822 North Waterbury Road, Des Moines

President—MRS. W. R. HORNADAY, Des Moines
President Elect—MRS. F. W. MULSOW, Cedar Rapids
Secretary—MRS. M. J. MOES, Dubuque
Treasurer—MRS. A. E. MERKEL, Des Moines

THE THIRTEENTH ANNUAL CONVENTION

The Thirteenth Annual Meeting of the Woman's Auxiliary to the Iowa State Medical Society will be held in Des Moines, April 15 and 16. Our headquarters will be the Hotel Kirkwood. You will find the complete program in this issue; read it carefully and plan to attend every function.

The preconvention board meeting will be held April 15 at the hotel and we are hoping to have every officer, committee chairman and county president present. Defense plans require much planning and we need your help. Luncheon follows our meeting.

Every visiting doctor's wife is invited to attend our general meetings whether she is an auxiliary member or not. Our dinner on Wednesday evening is open to both doctors and wives. We are planning an interesting program during the dinner hour which will conclude in time for the doctors to attend their party.

Our speaker on Thursday morning, Wilma Phillips Stewart, is well known to all who read her splendid column in the daily paper. She will bring us a practical message on Nutrition, which is the thing most home-makers need during these days of rationed foods. The Broadlawns Nurses Chorus will sing for us at the close of our morning session.

We always look forward to our annual luncheon, at which time we have the doctors as our guests. Dr. Earl B. Bush, President of the Iowa State Medical Society, Dr. Frank P. Winkler, President-elect and Dr. James C. Hill, our councilor, will be present. Our speaker, Dr. Thomas A. Burcham, will discuss Civilian Defense. As an auxiliary we are anxious to hear his message and to cooperate with him in his splendid program.

The annual banquet will be held at the Hotel Fort Des Moines at 6:30 p. m. on Thursday evening. Inasmuch as our ranks are somewhat broken this year, will you please make a special effort to attend our meeting and help make it worthwhile?

Mrs. W. R. Hornaday, President

Cass County

The Woman's Auxiliary to the Cass County Medical Society met Wednesday, February 18, at the Hotel Whitney in Atlantic for a one o'clock luncheon and meeting. Thirteen of the fourteen members were present. Officers for 1942 were elected as follows: Mrs. Millard T. Petersen of Atlantic, president; Mrs. Joseph Schiff of Anita, vice president; and Mrs. Emil C. Petersen of Atlantic, secretary and treasurer. At the business meeting it was voted to donate five dollars to the State Nurses Fund, and five dollars to the Red Cross. Our auxiliary will work at the Red Cross rooms once a month. Mrs. William R. Hornaday of Des Moines, State President, discussed plans of the State Auxiliary. Guests of our meeting were Miss Lillian Zindell, superintendent of Atlantic Hospital, and Mrs. William S. Reiley of Red Oak.

Mrs. Emil C. Petersen, Secretary

Dallas-Guthrie Auxiliary

Elwyn T. Butterfield, M.D., of Dallas Center furnished the program for the Woman's Auxiliary to the Dallas-Guthrie Medical Society, at a meeting held Thursday, January 15, in Adel. Dr. Butterfield spoke on "Pneumonia". Mrs. C. E. Porter of Redfield spoke briefly on topics from *Hygeia*.

Mrs. R. I. McGilvra, Secretary

Montgomery County

The Woman's Auxiliary to the Montgomery County Medical Society met Tuesday, February 17, for a luncheon meeting at the Johnson Hotel in Red Oak. The State President, Mrs. William R. Hornaday of Des Moines, was our guest, and presented the work of the auxiliary and the defense plans of the organization.

Mrs. Oscar Alden, President

Polk County

Members of the Woman's Auxiliary to the Polk County Medical Society met Tuesday, January 27, at Younkers Tea Room for a one o'clock luncheon, fol-

lowed by election of officers and bridge. The president, Mrs. Wilbert W. Bond, presided during the business meeting, and the following officers were elected for the coming year: Mrs. Julius S. Weingart, president; Mrs. James A. Downing, president elect; Mrs. John C. Parsons, vice president; Mrs. Donald H. Kast, secretary; and Mrs. Elmer E. Kottke, treasurer.

Mrs. H. I. McPherrin

Pottawattamie County

On Monday, January 19, members of the Woman's Auxiliary to the Pottawattamie County Medical Society, entertained at a dinner party to honor the physicians who had practiced in the county for forty years or more. The dinner was held at the Ogden Hotel in Council Bluffs. With Dr. Arthur C. Brown of Council Bluffs acting as toastmaster, the following guests were honored: Dr. Grant Augustine, Dr. W. P. Hombach, Dr. F. Earl Bellinger, Dr. M. A. Tinley, Dr. E. C. Weir, Dr. Karl Werndorff, Dr. H. C. Boyer, Dr. F. W. Dean, Dr. Mary Louise Tinley and Dr. Christine Erickson-Hill, all of Council Bluffs. Out of town guests were Dr. Charles Giles of Oakland, Dr. Morris Moore of Walnut, Dr. Carl Baumeister of Avoca, and Dr. A. O. Wyland of Underwood. The committee in charge of arrangements for the party included Mesdames S. D. Maiden, Gordon N. Best, Aldis A. Johnson, A. V. Hennessy, J. P. Cogley and M. A. Tinley.

Mrs. William R. Hornaday of Des Moines, State President, was a guest of the auxiliary Monday, February 16, at a luncheon meeting held in Council Bluffs. Her address was on "The Objectives of the Auxiliary". Officers for 1942 elected at the business session are as follows: Mrs. Grant Augustine, president; Mrs. Robert S. Moth, vice president; Mrs. John P. Cogley, secretary; and Mrs. Sydner D. Maiden, treasurer.

Mrs. I. Sternhill, Publicity Chairman

BOOK NOTES

Every evil has some advantage, and perhaps the one praiseworthy characteristic of war is that it makes the public more health-conscious. Just from the press this month is *Everyday Nursing in the Everyday Home* by Elinor Norlin, R.N., and Bessie Donaldson, R.N. Designed to help home-makers conserve and protect health and intended for those who do not expect to become graduate nurses, Misses Norlin and Donaldson have prepared a fine book based on their experiences in private, hospital and public health nursing.

There was published in 1934 a two hundred page book by Edmund Jacobson, M.D., entitled *You Must Relax*, and we are suggesting that this is an appropriate time to re-read it. Dr. Jacobson prescribes a system of "progressive relaxation" which relieves mental tension through physical relaxation. His sys-

tem has produced beneficial results in ailments such as nerve exhaustion, nervous indigestion, colitis and high blood pressure.

For those rugged individuals addicted to diets and exercises in their desire to keep trim and fit there is a new practical manual of diets, exercises and innumerable suggestions from vitamins to push-ups by Dr. A. W. Allen and F. G. Kimball entitled *How to Feel Better and Look It*. In addition to the text there are thirty-two pages of illustrations of exercises which can be practiced at home without special equipment.

Let's Look at Your Teeth by R. H. Brotman, D.D.S., is an answer to the more usual questions of the layman on the care of the mouth. Decay, abscessed teeth, pyorrhea, anesthesia, artificial teeth and children's dentistry are a few of the subjects discussed in such excellent style that the reader's attention is guaranteed not to lag. The chapters on "Dental Dens" and "Dental Quackery", concerned with the rapidly vanishing dental charlatan, are the best reading in the book.

Allergy is a new field in medicine, but nevertheless nine out of ten persons now speak of their personal idiosyncrasies. *Strange Malady* by W. T. Vaughan, M.D., is a readable, well-illustrated book on allergy. It is packed with anecdotes and has an especially distinctive frontispiece—a composite photograph of some of the various things to which people may be allergic. This is considered the best book on the subject yet available to the general reader.

Mrs. K. M. Chapler

SPEAKERS BUREAU RADIO SCHEDULE

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WSUI—Fridays at 9:15 a. m.

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March 18-20	An Adequate Diet	R. J. Porter, M.D.
March 25-27	Health, Strength and Beauty Health Essay Contest Winner	

NATIONAL MEETING

Haddon Hall will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Atlantic City, New Jersey, June 8-12, 1942.

Requests for reservations should be sent immediately to Haddon Hall, Atlantic City, New Jersey.

SOCIETY PROCEEDINGS

Black Hawk County

The Black Hawk County Medical Society held its regular meeting Tuesday, February 17, at Black's Tea Room in Waterloo. The local chapter of the Disabled Veterans was host for the evening and sponsored the following program which was presented by staff members of the Veterans Hospital in Des Moines: Legal Aspects of Disabled Veterans, as to Compensation and Medical Benefits, Mr. William Nugent, manager; Regulations Governing Hospitalization and Treatment of Service and Non-service Disabilities, E. T. Butzke, M.D., chief medical officer; and The Out-patient Service and Procedure in Emergency Cases, F. P. Dolan, M.D., chief of out-patient service.

Newly elected officers for 1942 are Dr. Edward W. Thielen, president; Dr. Alfred J. Staudt, vice president; Dr. Craig D. Ellyson, secretary; Dr. George C. Murphy, treasurer; Dr. Emery E. Magee, delegate; and Dr. Thomas F. Thornton, alternate delegate. All officers are of Waterloo.

Craig D. Ellyson, M.D., Secretary

Bremer County

The combined monthly meeting of the Bremer County Medical Society and the staff of St. Joseph Mercy Hospital was held at the Fortner Hotel in Waverly, Monday, January 26. The scientific program consisted of a motion picture on Diphtheria and Croup.

O. S. Blum, M.D., Secretary

Des Moines County

Raymond W. McNealy, M.D., associate professor of surgery, Northwestern University Medical School, Chicago, was guest speaker for the Des Moines County Medical Society at a dinner meeting held Tuesday, February 10, in Burlington. Dr. McNealy spoke on The Management of Acute Gallbladder Disease.

E. C. Sage, M.D., Secretary

Greene County

The regular monthly meeting of the Greene County Medical Society was held at the Greene County Hospital in Jefferson, Thursday, February 12. The speaker was Clifford W. Losh, M.D., of Des Moines, who discussed the Hypertrophied Prostate Gland.

John R. Black, M.D., Secretary

Harrison County

Newly elected officers of the Harrison County Medical Society are Dr. Francis X. Tamisiea of Missouri Valley, president; Dr. Carl A. Heise of Missouri Valley, vice president; and Dr. Frank H. Hanson of Magnolia, secretary and treasurer.

Howard County

At the annual meeting of the Howard County Medical Society on Thursday, January 8, the following officers were elected for 1942: Dr. Joseph W. Jinderlee, president; Dr. William C. Hess, vice president; Dr. Francis E. Giles, secretary and treasurer; Dr. William A. Bockoven, delegate; and Dr. Paul A. Nierling, alternate delegate. All officers are of Cresco.

F. E. Giles, M.D., Secretary

Iowa County

Results of the recent election of officers for the Iowa County Medical Society are as follows: Dr. Donald F. Miller of Williamsburg, president; Dr. Christian H. Herrmann of Amana, vice president; Dr. Irvin J. Sinn of Williamsburg, secretary and treasurer; Dr. Henry G. Moershel of Homestead, delegate; and Dr. Edward L. Hollis of Marengo, alternate delegate. Barclay J. Moon, M.D., of Cedar Rapids, spoke before the group on Fractures of the Hip.

Johnson County

Health Problems Created by Disasters were discussed by Milford E. Barnes, M.D., Iowa City, professor and head of the department of hygiene and preventive medicine, State University of Iowa, College of Medicine, at a meeting of the Johnson County Medical Society held at the Hotel Jefferson in Iowa City, Wednesday, February 4. After his lecture, Dr. Barnes showed two moving picture films on Men Against the River and Japs Bomb the U. S. A.

A. L. Sahs, M.D., Secretary

Lyon County

The Lyon County Medical Society met in annual session at the Vander Wilt Hospital in Rock Rapids, Monday, February 2, and elected the following officers for 1942: Dr. Louis L. Corcoran of Rock Rapids, president; Dr. Francis B. O'Leary of George, vice president; and Dr. Stuart H. Cook of Rock Rapids, secretary and treasurer.

Madison County

Arnold L. Nelson, M.D., of Des Moines, furnished the scientific program at the February meeting of the Madison County Medical Society. He presented a series of lantern slides showing fractures and their method of treatment.

Evelyn M. Olson, M.D., Secretary

Mahaska County

The annual election of officers for the Mahaska County Medical Society held Tuesday, January 13 at the Mahaska County Hospital in Oskaloosa, resulted as follows: Dr. Kenneth L. Johnston, presi-

dent; Dr. Philip M. Day, vice president; and Dr. George H. Clark, secretary and treasurer. All officers are of Oskaloosa.

Monroe County

Dr. James F. Stafford of Lovilia and Dr. Thomas A. Moran of Melrose were re-elected president and secretary-treasurer, respectively, of the Monroe County Medical Society, at a meeting of the group held recently in Albia.

Polk County

The annual meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held Wednesday, January 21, at Younkers Tea Room in Des Moines. President Daniel J. Glomset delivered an address on The American Way of Living. Dr. James E. Dyson assumed the presidency of the organization for 1942, and Dr. James A. Downing was named president elect. Dr. Donald H. Kast was re-elected secretary and treasurer.

The next meeting will be held at Younkers Tea Room Wednesday, March 18, when the society will entertain two guest speakers. E. T. Bell, M.D., professor of pathology, University of Minnesota Medical School and the Postgraduate Medical School, will speak on Kidney Disease, and C. Anderson Aldrich, M.D., of Winnetka, Illinois, associate professor of pediatrics, Northwestern University Medical School, will discuss Treatment of Chronic Nephritis and Nephrosis.

Sac County

The Sac County Medical Society met at the Park Hotel in Sac City, Thursday, January 22. The guest speaker was Sumner B. Chase, M.D., of Fort Dodge, who presented a discussion on the subject of Headaches. Election of officers resulted in the renaming of the 1941 officers to serve during 1942. They are as follows: Dr. Chelsea D. Gibson of Lake View, president; Dr. William I. Evans of Sac City, secretary and treasurer; Dr. Louis B. Amick of Sac City, delegate; and Dr. A. A. Blum of Wall Lake, alternate delegate.

W. I. Evans, M.D., Secretary

Scott County

Herbert Rattner, M.D., of Chicago, addressed the Scott County Medical Society Tuesday, February 3, in Davenport on The Diagnosis and Treatment of Common Skin Diseases. The dinner meeting was held at the Lend-A-Hand Club.

On Tuesday, March 3, the society will entertain William D. Paul, M.D., from the State University of Iowa, College of Medicine, Iowa City, who will speak on Vascular Disease.

J. H. Sunderbruch, M.D., Secretary

Wapello County

The Wapello County Medical Society, meeting in regular session at St. Joseph's Hospital in Ottumwa, Tuesday, February 3, heard the subject of Hyperthyroidism discussed by Glenn C. Blome, M.D., of Ottumwa.

Webster County

Walter R. Fieseler, M.D., newly established practitioner in Fort Dodge, was the speaker for the meeting of the Webster County Medical Society held Wednesday, February 11, at the Hotel Warden in Fort Dodge. Dr. Fieseler spoke on Calculi of the Urinary Tract, supplementing his talk with x-ray demonstrations and colored motion pictures and slides.

Woodbury County

The Woodbury County Medical Society met Monday, January 26, at the Mayfair Hotel in Sioux City, at which time Charles H. Slocumb, M.D., of the Mayo Clinic, Rochester, presented an illustrated lecture on The Diagnosis and Treatment of the More Common Types of Arthritis.

W. K. Hicks, M.D., Secretary

Iowa and Illinois Central District Medical Association

The spring meeting of the Iowa and Illinois Central District Medical Association will be held Thursday, March 26, at the Fort Armstrong Hotel in Rock Island, Illinois. A dinner at 6:30 will precede the scientific program. The guest speaker of the evening will be Robert Lee Sanders, M.D., associate professor of surgery at the University of Tennessee College of Medicine, Memphis, and chief of the surgical division of the Sanders Clinic in Memphis. Dr. Sanders will speak on Surgical Lesions of the Colon. F. E. Schmidt, M.D., Chicago, of the Lederle Laboratories will present a motion picture in color with sound on All Sulfonamide Therapy.

James Dunn, M.D., Secretary

PERSONAL MENTION

Dr. Arthur Steindler of Iowa City, head of the orthopedic department of the State University of Iowa, College of Medicine, was guest speaker for the Jasper County President's Ball, held in Newton, Friday, January 30. Dr. Steindler spoke on "The Latest Methods of Treating Infantile Paralysis."

Dr. Frederick C. Lowry, who has been engaged in general practice in Centerville during the past year, has been appointed to enter the orthopedic department of the State University of Iowa, College of Medicine, at Iowa City. He will assume his duties on the staff at once.

Dr. Jack V. Treynor of Council Bluffs discussed the subject of "Hearing" for the Pacific Junction Women's Club, at their meeting held Wednesday, January 14.

Dr. Kendrick A. Smith, who for the past eighteen months has been associated with Drs. William H. Bickley and Fred M. Marquis in Waterloo, has received an appointment to the staff of the Mayo Clinic, in Rochester. He will be first assistant to Dr. Arlie R. Barnes, head of the heart section.

Dr. Donald M. Harris of LeMars was guest speaker

for the Rock Rapids Women's Club, at a meeting held Friday, February 6, in the Community building. Dr. Harris spoke on "Mental and Physical Health".

Dr. Charles L. Kingsbury, a former resident of Keokuk, has returned to that city from Clarence, where he has been practicing for the past five years. Dr. Kingsbury will resume practice in Keokuk, occupying the offices of Dr. A. A. Johnstone who has entered military service.

Dr. Jesse I. Jones of Manchester addressed the Dubuque Lions Club at the regular meeting of that group held in Dubuque, Wednesday, January 14. Dr. Jones spoke on "The Heart Trouble of the Business Man".

Dr. Paul D. Anneberg, younger son of Dr. August R. Anneberg, has become associated with Drs. Anneberg and Sidney D. Martin in Carroll. Dr. Paul was graduated in 1937 from the State University of Iowa, College of Medicine, Iowa City, and interned at Harper Hospital in Detroit, Michigan, followed by a year of general residency in the Charles Godwin Jennings Hospital in Detroit. For the past two years he has been an assistant in the combined service of genito-urinary and proctologic surgery at the City of Detroit Receiving Hospital.

Dr. Harold W. Morgan of Mason City addressed the Lions Club Wednesday, February 11, at a meeting held in Mason City. His subject was "The Blood Bank and Recent Developments in the Medical Field".

Dr. David O. N. Lindberg, formerly of Decatur, Illinois, has assumed duties on the staff of the Oakdale Sanatorium. Dr. Lindberg had been superintendent and medical director of the Macon County Tuberculosis Sanatorium for fourteen years.

Dr. William F. Mengert of the State University of Iowa, College of Medicine, Iowa City, discussed "Birth Control and Pregnancy", for members of the University of Iowa Dames, at a meeting held in the Memorial Union, Wednesday, February 11.

Dr. Anthony P. Smith of Ames has located in Gladbrook, where he will have the offices formerly occupied by the late Dr. August F. Walter.

Dr. Carl J. Lohmann of Burlington, Des Moines county emergency medical chief for civilian defense, was guest speaker for the meeting of the Burlington Hospital Alumnae Association, held at the nurses' home Monday, February 2. His subject was "Medical Aspects in Connection with Civilian Defense".

Dr. John F. Meany of Rockwell announces the association with him in the practice of medicine of Dr. W. P. Pelz, who has returned to this country from Fairbanks, Alaska, where he was medical supervisor on a defense project. He was graduated

from the Berne University School of Medicine, Berne, Switzerland, and completed his internship at the Iowa Methodist Hospital in Des Moines.

Dr. George A. Bemis of Garner, chairman of civilian defense work in Hancock county, outlined plans for this activity at a meeting of the Stilson Community Club held Monday, February 9.

Dr. William A. Howard, formerly retired and living near Cherokee, has located in Truro, where he will resume practice. He will occupy the offices of Dr. Herbert N. Boden who has entered the military service.

DEATH NOTICES

Fink, Anthony Lothar, of Carroll, aged sixty, died suddenly January 20 after a heart attack. He was graduated in 1910 from Deutsche Universität Medizinische Fakultät, Prague, and had long been a member of the Carroll County Medical Society.

Fisher, William Clark, of Williamson, aged seventy-one, died January 17 following a heart attack. He was graduated in 1893 from the State University of Iowa College of Medicine, Iowa City, and at the time of his death was a member of the Lucas County Medical Society.

Hibbe, Henry Bernard, of Dubuque, aged fifty, died January 24 after a long illness. He was graduated in 1922 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Dubuque County Medical Society.

Jones, Mark Clyde, formerly of Boone, aged seventy, died February 10 at his home in Joliet, Illinois, after a heart attack. He was graduated in 1898 from Marion-Sims College of Medicine, St. Louis, and had long been a member of the Boone County Medical Society.

Kessler, John Blair, of Cedar Rapids, aged ninety-one, died January 14 following a short illness. He was graduated in 1877 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a Life Member of the Johnson County and Iowa State Medical Societies.

Mason, Harry Philson, of Wilton Junction, aged sixty-seven, died February 8 of heart disease. He was graduated in 1900 from the University of Illinois, College of Medicine, Chicago, and at the time of his death was a member of the Muscatine County Medical Society.

Wyatt, Orren William, of Manning, aged sixty-two, died February 3, after an extended illness. He was graduated in 1909 from the University of Nebraska, College of Medicine, Omaha, and at the time of his death was a member of the Carroll County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. MCCLINTOCK, Iowa City

DR. R. T. LENAGHAN, Clinton

DR. TOM B. THROCKMORTON, Des Moines

DR. WALTER L. BIERRING, Des Moines

DR. HENRY G. LANGWORTHY, Dubuque

Medical History of Webster County

By WILLIAM W. BOWEN, M.D.,
Fort Dodge, Iowa

(Continued from last month)

DOCTORS WHO HAVE PRACTICED IN WEBSTER COUNTY

Dr. Stephen B. Olney

The first doctor to live in Fort Dodge was the military surgeon, Dr. Charles Keeny, but he came with the soldiers in June, 1850, and left with them in 1853. The first doctor to locate in Fort Dodge was Dr. Stephen B. Olney, who came in 1855. The Olneys were a family of considerable importance in early history. Thomas Olney and his son were partners of Roger Williams in the proprietorship of Rhode Island in its early settlement. The Olneys lived in Rhode Island for six generations, until Stephen Olney, the grandfather of Dr. S. B. Olney, moved to Saratoga, New York. The Battle of Saratoga where Burgoyne was forced to surrender to General Gates in the Revolutionary War occurred on the Olney farm, breaking the power of the British in the north. Dr. S. B. Olney was born in Saratoga. Dr. Olney's mother died two years later and his father married again and raised a second family. In 1833 he moved to Wood County, Ohio, and settled in the woods. At eighteen years of age Stephen B. Olney entered Miami College and at twenty-five years of age he took up the study of medicine under Dr. Burritt who lived in what is now Grand Rapids. He was graduated in 1847 from the Cleveland Medical College, which was a regular school. However, Dr. Olney studied homeopathy in 1865, and practiced that system afterward. He practiced in Ohio in several different towns until April 1, 1855, when he came to Fort Dodge. For some years there were so few people here that it was hard to make a living from practice and Dr. Olney became the first superintendent of schools.

In 1849 he married Miss Stella Badger of Wood County, Ohio. One of their five children was Dr. Floyd B. Olney who practiced medicine in Fort Dodge until his death. In 1862 Dr. S. B. Olney

became surgeon of the Thirty-second Iowa Infantry and served until 1865 when he resigned because of poor health. He moved from Fort Dodge to Hammonton, New Jersey, in 1890 and died there on March 31, 1891.

Dr. S. B. Olney was a refined and well educated gentleman and enjoyed the friendship and loyalty of a large clientele. He did some rather startling things in practice. One day he drove to Algona, a distance of forty-one miles today, but nearer fifty miles at that time. There he found a man who had been badly frozen. The next morning he did a quadruple amputation, that is, he amputated both hands and both feet, and the man lived. There is a performance that would startle most of the young surgeons of this boasted age of surgery.

Dr. William L. Nicholson

Dr. W. L. Nicholson was the second physician to locate in Fort Dodge. He came in 1855 only a few months after Dr. Olney. He was born in County Tipperary, Ireland, September 25, 1832, and was the son of Robert and Mary (Blundon) Nicholson. On his paternal side he was a descendant of a Danish knight, Ralph Nikelsen, who had served under William, Duke of Normandy, at the famous Battle of Hastings. William, Duke of Normandy, was later William the Conqueror, King of England. William conferred on him a large grant of land in England, a coat of arms and a crest. A later descendant followed Henry III to Ireland on his first invasion of that country, but the Nikelsens did not settle permanently in Ireland until 1645. In that year Robert Nickolson was given a large grant of land in Ireland and lived there in Counties Tipperary and Waterford. There Dr. Nicholson, the eldest son of his father, was raised. He inherited pronounced literary tastes which were further developed by environment. His education commenced at an early age in the schools of Waterford and at the age of

seven he had a fair knowledge of Latin. He attended a college on his father's estate and later Trinity College in Dublin. After that he attended the University of Glasgow where he was graduated as Bachelor of Medicine in 1852. That degree is not given in this country, but is still given in the British Isles. It does not give its possessor the full rights of Doctor of Medicine, but he does have the right to practice medicine. Oliver Goldsmith, the author of *The Vicar of Wakefield*, held that degree, but always called himself Dr. Goldsmith. Dr. Nicholson came to Canada where he remained for two years and then located in Fort Dodge. He liked to hunt and the hunting here was good, which was one of the determining factors in his locating here. There were very few people and little medical practice so he began teaching in a private school. On August 16, 1862, he enlisted as a private in the Thirty-second Iowa Volunteer Infantry. At Davenport in October of the same year he was promoted to the Medical Corps as Second Lieutenant and subsequently was made Major and Chief Surgeon. He participated in many battles and was taken prisoner once, but soon released, and continued throughout the war. He was mustered out at New Orleans in 1865 and returned to Fort Dodge where he resumed his practice which he followed until his death in 1890.

Dr. Nicholson was married twice, first to Anna J. Leonard of Cedar Rapids, by whom he had a son, W. L. Nicholson, and second to Miss Mary Ann Sherman who was a native of County Roscommon, Ireland. They had a daughter Anna, who now lives in Australia. Dr. Nicholson was a very unique man. He was a classical scholar, a teacher, a poet of no mean ability, a hunter and a lover of wild life, a good husband and father, and a good man in general. He was a Roman Catholic and a good one. He was a genial conversationalist and very witty. There are more quaint stories told of him than any other doctor except Seymour, and they are more tellable and not so rough.

One midwinter night when a blizzard was blowing, he was called. He got out in his night shirt, opened the door, and found a man standing there, shivering in the cold. The doctor said "Why don't you come in? You are freezing me as well as yourself." The countryman came in and told the doctor there was some one sick at Clare (about thirteen miles away). There was then a doctor here that Nicholson did not like. His name was Palmer but Nicholson always called him Pal-mer. The doctor said "Do you think that any one who has any respect for himself or the esteem of any one in the community or the affection of his family could go to Clare facing this blizzard and this

inclement weather tonight? Go and get Pal-mer."

Another time he was out in the country to see a patient. The windows of the house were closed tight, no air was circulating and the room was smelling musty. He opened a window and told the people to keep it open. The next day he found the windows closed and the room as stuffy as ever. He again opened the window, gave a short lecture on the necessity for fresh air and told them again to keep it open. - The third day he found the same condition, so he went to the window, raised his foot and rammed it through the window sash and all and said, "Now, will you keep that window open?"

For a time Dr. Nicholson operated a drug store with R. W. Crawford. One day he went into the store, apparently peeved about something and said to Crawford, "R. W., but for one thing you would be the most remarkable man in Fort Dodge." Crawford, pleased, said "Why, how's that? In what way?" Nicholson said "But for your son Charles you would be the worst fool in Fort Dodge."

Dr. Nicholson died in 1890; his wife whom he married in 1876 still lives in the old home in Fort Dodge, fifty-one years after his death.

Dr. T. F. Grayson

Dr. T. F. Grayson came from two distinguished families in Virginia, the Grayson and the Fitzhugh families. His parents were Robert Grayson and Margaret (Fitzhugh) Grayson. His father was a large land owner in Virginia. Dr. Grayson himself was a young man of such importance that he was Comptroller of the Southern Confederacy. It was a part of his duties to sign the money issued by the Confederacy, and any one holding such a note is likely to find on it the signature of T. F. Grayson.

After the war was over the Graysons were, like all other Virginians, destitute, and Dr. Grayson did not want to begin anew there. He had a brother, Benjamin Grayson, who had lived in Fort Dodge since 1855, so the doctor came here after the war and lived here all the rest of his life. He was well educated and very refined, a perfect gentleman at all times. On his way north he saw two paintings in a saloon and recognized them as works of master painters. He bought them and always kept them in his office. They were unsigned but it was evident that their painter was a master. After his death they became the property of Mrs. Carter, his niece, and she gave them to the Blandon Memorial Gallery where they may be seen any time. Dr. Grayson was never married. He had not only the respect of his patrons and friends but the deepest esteem of the other doctors. It was said of him that he could do more with some simple drug

like Dover powder than some men with a drug store full of remedies from the dignified and gentlemanly manner with which he administered it. He was a good judge of whisky (but never became intoxicated), and of horses, especially race horses. He is still remembered by those who knew him as the perfect Southern gentleman.

Dr. Harley G. Ristine

Dr. Harley G. Ristine was born in Crawfordsville, Indiana, May 21, 1838. After graduating from Wabash College he volunteered in the Civil War in Company K, Eighty-sixth Regiment, Indiana Volunteers. He served under General Lew Wallace, who was a fellow townsman of his, and one of his valued possessions was a copy of Ben Hur autographed by the author. After the war he studied medicine with his uncle, Dr. Henry Ristine, of Cedar Rapids, Iowa, and was graduated from Rush Medical College. He came to Fort Dodge in 1871 and lived here forty-six years. Dr. Ristine was one of the organizers of the Fort Dodge District Medical Society and later president of it. It disappeared when the State Medical Society was reorganized.

One of Dr. Ristine's experiences is worthy of a place in medical annals. On August 21, 1901, Frank E. Bender, an engineer on the Illinois Central Railway, was pulling out of the yards in Fort Dodge and passing a freight car on a siding. A moulding on the side of the freight car had become loosened so that it was hanging by one end, the other end projecting out from the car and pointing toward Bender's engine. When the engine passed the end of the building, it entered the cab and passed through Bender's body just above the heart, thence upward and through, to come out near the neck behind. The engine kept moving until the moulding reached the tender and broke loose from the freight car. Bender could not be removed from the cab until the moulding was sawed off. The moulding had been a two by four, but had been planed off until it was 3.5 inches wide and 1.25 inches on one edge and 1.5 inches on the other edge. About fourteen feet of it had passed through Bender's body. He was taken immediately to the hospital where Dr. Ristine removed the three-foot long piece from the anterior side. In the moulding was a nail, so bent that it formed a hook, and when the moulding was removed the nail caught in the lung tearing away a huge piece. The hemorrhage was terrific, but was controlled by packing with gauze. After a stay in the hospital of twenty-six days he went home to Waterloo. In a year's time he began running another engine on the short road from Waterloo to Denver Junction and Sumner, Iowa. Later he was employed by the Chicago and Great Western Rail-

road, and retired at seventy-three years of age.

Dr. Ristine was married twice; by the first marriage he had one son, Albert, and by the second marriage he had a son, Theodore, and a daughter, Kitty. He was very refined, always using polite and refined language. He neither swore nor drank nor used tobacco in any form, nor told vulgar stories. One cold winter he went several miles in the country to see an old Irish lady. He had been there the day before and she had asked him to bring her a pint of whisky the next day. He got the whisky and put it in his overcoat pocket. Somehow the cork came out and spilled a nice drink. He discovered it when he went in to see her and began apologizing because the cork had come out and spilled a little of it. She said, "'Tis all right, Doctor, 'tis all right; it'll do you good for 'tis a cold morning inny how".

He was not mercenary at all. It was found after he died that he had treated one family for forty-six years, confining the mother for all her children and taking care of the entire family all those years, for which they had paid him only about \$20.00; still he was very friendly to them and did all their work to the very last.

One time he referred a patient who needed an operation to the county physician. In those days the county physician received no fee for operating, but the county would pay the assistant any reasonable fee. The next day Dr. Ristine went into the hospital and found the county physician operating upon his patient and another man assisting. He became furious and was talking to Dr. Saunders, who was always a peace-maker, about it. He said he was going right in there and tell that Irishman what he thought of him. Dr. Saunders got between him and the door and said, "Now don't do that. Wait until you cool off a little and then you won't say so much". The doctor said, "I know it. That's why I want to say it now. I want to tell him what I think of him while I am mad".

He was innocent and entirely moral in all his relations to others, never suspecting anything immoral in others. For many years he drove a white mare which he called Patti, he said "Not from the great singer because she does not have much of a voice, but because Patti is a pretty name". One morning his office girl did not come to work and later in the day he got a phone call from her mother asking him to come out at once, that the girl was poisoned and to bring his stomach pump along. He took his stomach tube and drove out to see the girl. As he went into the house with his stomach tube in his hand, he heard a cry from the bedroom and went in to find a baby yelling in the bed. The next morning he went out to the

barn and found Patti with a mule colt. In telling about the episode a few days later he said, "I never knew there was anything wrong with the morals of the females of my establishment".

Dr. Ristine died on January 30, 1917, of diabetes at seventy-nine years of age. He was a good and a useful doctor and left the world better for having lived in it.

Dr. O. E. Evans

Dr. O. E. Evans of Gowrie was born at DeWitt, Clinton County, Iowa, on May 2, 1846. He received education in the public schools in Clinton County and DeWitt and entered the Civil War in 1863 as a member of the Forty-fourth Infantry, serving throughout the remainder of the war. He then returned to DeWitt and began the study of medicine with Dr. Morgan of that place after which he attended lectures at Western Reserve College in Cleveland, Ohio, from which he did not graduate. He then accepted an offer to go to Galveston, Texas, where he remained one year. He returned to Iowa and began the practice of medicine in Gowrie in 1872. He took further lectures in Keokuk in 1878, received his doctor of medicine degree, and resumed his practice in Gowrie. He was a bachelor for many years and lived with a cousin in Gowrie. Eventually the cousin died and he afterward married his widow Mrs. Elizabeth Evans in 1901. He died in Gowrie on November 11, 1911.

Dr. Evans was a quaint and unique character. One could not talk to him two minutes without laughing at his unique and humorous remarks. Gowrie was then populated entirely by Swedes, the doctor and the station agent being the only Americans living there. The Swedes liked him, however, although he was always damning the Swedes good-naturedly and they always took it good-naturedly. One day he was called far out in the country to see a man who had been gored by a bull; his abdomen had been ripped open and a loop of intestine was hanging out. The doctor was not a surgeon, but he put the intestine back and sutured the wound. He went home and paid no further attention to it, thinking the patient would surely die. A few days later a fellow from that part of the country came into town, and the Swedes gathered around him to find out how the patient was getting along. Dr. Evans saw him, and went out too. Every man there was a Swede. Evans said, "How is that boy out there?" and the fellow said, "He is pretty well". Evans said, "Is he vomiting all the time?" The fellow replied, "No he has not vomited at all". "Is he bloated up like a toad?" "No he is not bloated at all." "Have his bowels moved?" "Yes he had a good movement this morning." Evans made his way

through the crowd of Swedes toward his office and said, "The damn Swede will live; if he'd been a white man, he'd have died".

The old settlers could tell innumerable anecdotes about him, all of them funny.

Dr. Floyd B. Olney

Dr. Floyd B. Olney was a son of Dr. Stephen B. Olney. He was born in Waterville, Ohio, on November 20, 1851, where his parents lived at that time. When he was six the family moved to Fort Dodge. He attended the schools here and was graduated as a member of the first high school class. He attended a seminary in Ohio, then returned and took up printing, beginning with the *Northwest Weekly*, which was a predecessor of the *Messenger*. He became a printer which trade he followed for six years. In 1875 he entered the Hahnemann Medical College from which he was graduated in 1881. He had practiced with his father previous to that, since 1879. He returned to Fort Dodge in 1881 and again took up practice, continuing until his tragic death which occurred August 9, 1917. He was on his way to visit his daughter in Spirit Lake, accompanied by Mrs. Gertrude Haley and her little son four years of age. A train struck his car about a mile east of Pomeroy and the doctor and boy were instantly killed. Mrs. Haley was severely injured. She recovered in about a year and since then has married Dr. R. C. Sebern of Fort Dodge.

Dr. Olney was a quiet inoffensive man, not given to argumentation; he took the rebuffs of the world and the quarrels in the profession without any active participation and without comment. He belonged to the Christian Church and was an influential Freemason, belonging to the Chapter and the Commandery. He left a large number of devoted friends and patrons.

Dr. Francis Emery Seymour

Dr. F. E. Seymour was born in Westmoreland, Oneida County, New York, in 1851, and came to Iowa with his parents in 1859. He was graduated from the Medical Department of the State University in 1879 and came to Fort Dodge in 1883, where he spent the remainder of his life. He was a very successful doctor and had accumulated more wealth than any who ever practiced here, being worth some \$300,000 at the time of his retirement. He was a very good business man as well as a good doctor. He was rather short and very baldheaded. He used very forcible language and was noted for his uncanny and uncouth remarks. He was married to Miss Olga Larson in 1921, two years before he died. She still survives him.

He was a large land owner and had interests in many industries in Fort Dodge. He was very well

liked; every one laughed at his surprising and sometimes unprintable remarks. When he told a patient anything, there was never any doubt as to what he meant. For instance, he performed an operation for hemorrhoids on a girl here in her home, and his advice when he left her was "Now Molly, if you must urinate, turn over and do it on your face", except that he substituted another word for urinate. Another time he was walking along the street with a friend when they met a lady to whom Dr. Seymour tipped his hat very politely. As they passed along Dr. Seymour said, "That is a very fine woman, well educated and sensible, but constipated as hell".

A number of young men studied in Dr. Seymour's office before they attended medical school. His advice to one of these young men was, "Now, I'll give you some advice. Keep your nose clean and your pants buttoned up. If you must sport, don't do it in your office; if you do that woman will tell her friends and they will all come to see you and then you'll have trouble". There is no end to the stories that the people tell about what Dr. Seymour said or did. Several years before he was married he adopted a boy. The boy did not turn out so well, but the doctor willed him considerable property and after he got it, he ran through with it in a short while and then committed suicide.

For all his uncouth remarks and actions, he was well liked and got along well with women and children after they had learned not to be afraid of him. Dr. Seymour died in Los Angeles, California, January 14, 1923, at seventy-two years of age.

Dr. John B. Kime

Dr. J. B. Kime was born in Shelby County, Iowa, in October, 1855. He was the son of Abraham and Mary (Baughman) Kime, both of whom were natives of Indiana. Dr. Kime was educated in the public schools and the State University. He subsequently took up the study of medicine and was graduated from the State University in 1883.

He first opened an office in Angus, Iowa, and remained there one year, coming to Fort Dodge in 1884. He soon began to specialize in tuberculosis and after a few years opened Boulder Lodge Sanatorium just north of the city. For three years he was lecturer on tuberculosis, giving talks throughout the state. In August, 1884, he married Miss Sarah Paugburn. Miss Paugburn was also a physician and a member of the doctor's class in Iowa City. They had two children, both girls, and now both married. Dr. Sarah Kime always did more general practice than Dr. John and was especially successful in obstetric work. After Dr. Kime had been here a number of years he moved to Des Moines and started the *Iowa Medical Journal*

which was eventually taken over by the Iowa State Medical Society and the name changed to THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Dr. Kime always took an active interest in civic affairs and was responsible for the present excellent water supply. It was proposed to abandon the wells supplying the city and put in a filtering plant instead. Dr. Kime from his study of the geology knew that we could obtain an unlimited supply of water. The water department, the city council and the mayor were all for the filtering plant, but Dr. Kime by a series of letters in the local papers, and by lectures which he delivered to any one who would listen, aroused such a public sentiment for cleaning out the wells that they were compelled finally to do so, and when they had cleaned out one well they had enough water to supply the city. Since then they have drilled several more, and nothing is ever heard of the filtering plant. The doctor was once elected to the city council and once to the state legislature. He entered the race for governor of the state of Iowa once, but was defeated in the primaries. His ideas on civic matters are usually good, but he is so pugnacious he does not get a hearing. He got out of touch with his county society and state society some years ago and since then he cannot get a chance to put his ideas before the medical societies of the state. A few years ago, without any reason, he attacked the county society viciously through the paper here. No one replied although it was considered in the society meetings, but it was believed that no one could wield such a vicious pen as Dr. Kime and it was decided to let him rave.

Dr. Kime in his investigations of tuberculosis thinks (and probably it is true) that by using chloride of gold, he can cure practically all cases of tuberculosis if it is given early, and he has worked out methods and dosages to do that, but he cannot now get any medical man to listen to him and cannot get before any society in the state to tell his story. He is now working in the Pottinger Sanatorium in Monrovia on the subject and it is to be hoped that California doctors will be more receptive than Iowa doctors. Here in brief is the idea: he has found that after a dose or two of gold the bacilli in the sputum tend to enter the white corpuscles, which they never do without the gold. In other words the white cells are caused to become phagocytes and destroy the tubercle bacilli. The doctor is now eighty-six years of age, and still betting "he won't be the next doctor in the county to go." He is healthy and lively, and as pugnacious as ever. His wife died several years ago. She was as mild and pleasing as the doctor is the opposite.

(To be continued)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD—By William E. Ladd, M.D., professor of child surgery; and Robert E. Gross, M.D., associate in surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

ACCIDENTAL INJURIES—By Henry H. Kessler, M.D., attending orthopedic surgeon, Newark City Hospital. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1941. Price, \$10.00.

ARTHRITIS IN MODERN PRACTICE—By Otto Steinbrocker, M.D., assistant attending physician, Arthritis Clinic, Bellevue Hospital. W. B. Saunders Company, Philadelphia, 1942. Price, \$8.00.

CARDIAC CLASSICS—By Fredrick A. Willius, M.D., and Thomas E. Keys, M.D., The Mayo Clinic. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

CLINICAL HEMATOLOGY—By Maxwell M. Wintrobe, M.D., associate in medicine, Johns Hopkins University. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

HEMORRHAGIC DISEASES—By Kaare K. Nygaard, M.D., former fellow in surgery, The Mayo Foundation. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

INFANTILE PARALYSIS—A Symposium Delivered at Vanderbilt University in April, 1941. Published by the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York. Price, \$1.25.

MEDICAL CLINICS OF NORTH AMERICA, November, 1941, Military Medicine—W. B. Saunders Company, Philadelphia, 1941. Price, \$12.00.

RHEUMATIC FEVER IN NEW HAVEN—Edited by John R. Paul, M.D., professor of preventive medicine, Yale University School of Medicine. Science Press Printing Company, Lancaster, Pennsylvania, 1941. Distributed by the Milbank Memorial Fund, 40 Wall Street, New York. Price, \$1.00.

TECHNIC OF CONTRACEPTION CONTROL—By Robert L. Dickinson, M.D., and W. E. Morris, M.D. The Williams and Wilkins Company, Baltimore, 1941. Price, fifty cents.

TEXTBOOK OF PEDIATRICS—By J. P. Crozer Griffith, M.D., emeritus professor of pediatrics, University of Pennsylvania; and A. Graeme Mitchell, M.D., professor of pediatrics, University of Cincinnati. Third edition, revised and reset. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

THE MARCH OF MEDICINE, New York Academy of Medicine Lectures to the Laity, 1941—Columbia University Press, Morningside Heights, New York, 1941. Price, \$2.00.

THE NEW INTERNATIONAL CLINICS, Volume IV, New Series Four—Edited by George M. Piersol, M.D., professor of medicine, Graduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1941.

THE 1941 YEAR BOOK OF PEDIATRICS—Edited by Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

THE 1941 YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY—Edited by Charles F. Painter, M.D., orthopedic surgeon to the Massachusetts Women's Hospital, Boston. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

BOOK REVIEWS

COMMUNICABLE DISEASE CONTROL

By Gaylord W. Anderson, M.D., professor of preventive medicine and public health, University of Minnesota. The Macmillan Company, New York, 1941. Price, \$4.25.

In the introduction the authors state that the book is written mainly from the standpoint of the protection of the community. However, individual or personal protection has not been disregarded especially when that will enhance community protection. The book, therefore, is especially valuable to all persons engaged in the many aspects of the public health control of communicable diseases. Even those not engaged primarily in public health work will gain a better understanding of communicable disease control if they will read this book.

Part I deals with the more general aspects of the subject while Part II is given over to a detailed consideration of specific diseases. Each disease or group of diseases, after being considered briefly from a descriptive angle, is taken up in detail regarding epidemiology and measures for control. In each instance the aspect of public health nursing care is emphasized. A summary at the end of the discussion of each disease or group of diseases is devoted to a discussion of health department programs, duties of health officers and the public health nurses functions. To the best of our knowledge this is the only book in print where all of the phases of public health control of communicable disease are thoroughly discussed in the particular relationship they held in each specific disease. Certainly not a single public health physician, health officer or public health

nurse can afford to be without this book. By these people it will be read more than once and referred to almost daily. Even to those who deal only occasionally with communicable diseases it will be a fund of information. To everyone dealing with human ills that are communicable from one to another this book is a necessity.

The authors are to be congratulated on the excellent organization of the book and especially on having it prepared in a volume that is within easy reach of every pocketbook.

R. M. S.

ORBITAL TUMORS

By Walter E. Dandy, M.D., adjunct professor, neurological surgery, Johns Hopkins University. Oskar Piest, New York, 1941. Price, \$5.00.

In 1921 Dandy found that the intracranial approach, through the roof of the orbit, to the orbital cavity is simple and reasonably safe. Tumors lying anteriorly in the orbit can be removed by the ophthalmologist through a conjunctival or upper orbital approach. However, most of the deeper tumors extend intracranially, and the care of these cases falls to the neurosurgeon.

The intracranial operation gives much fuller and safer exposure of the orbital contents than the lateral (Krönlein) approach. The optic nerve, the eyeball, three of the extra-ocular muscles, and the ophthalmic veins and arteries can be well exposed and

avoided during the dissection of a tumor. The approach is identical with that for hypophyseal tumors, and is the only approach permitting extirpation of an orbital tumor which extends intracranially.

This excellent monograph is a record of Dandy's experience in the surgical management of orbital tumors over a twenty-year period. The histories of twenty-four operative and seven non-operative cases are well presented and illustrated. Short chapters are devoted to the pathology of orbital tumors and to operative technic.

R. F. B.

THE COMPLETE WEIGHT REDUCER

By C. J. Gerling. Harvest House, 70 Fifth Avenue, New York, N. Y., 1941. Price, \$3.00.

This book is written for use by the laity in weight reduction of the obese. It is presented in scientific language and each subject is taken up in alphabetical order. The reducing racket, whether it be by mechanical or patented reducers, is given outspoken, careful, honest attention. Those patients whose obesity is due to glandular dysfunction are advised to see their doctor.

E. B. W.

THE MODERN TREATMENT OF SYPHILIS

By Joseph Earl Moore, M.D., associate professor of medicine, The Johns Hopkins University. Second edition. Charles C. Thomas, Publishers, Springfield, Illinois, 1941. Price, \$7.00.

Like the first edition of this book, Dr. Moore, in the second edition, has produced a very readable book in which one can easily find the information being sought without reading a vast amount of material. The author has borrowed liberally from the studies of the Cooperative Clinical Group of which he is a member. He has also had the advantage of the clinical work of "Department L", the syphilis clinic of Johns Hopkins University. These two voluminous sources of information plus his own experience have given Dr. Moore a tremendous fund of knowledge from which to draw.

In spite of the vast amount of material to work with (or it may be because of it) the author is inclined to be rather dogmatic in some of his opinions. This we believe is understandable for, right or wrong, the opinion of the group to which the author belongs has become the oracle of syphilis knowledge. Since most of their opinions have become "fact", as far as most people are concerned, it is also not surprising that this book should lean toward conservatism. The last chapter in the book, "The Intensive Arsenotherapy of Syphilis" is an excellent example.

The chapters on "The Biology of Syphilitic Infection in Relation to Treatment", "The Prognosis of Syphilis", and "Interpretation of Serologic Tests" should be read by every physician. In the last of

these, Dr. Moore hints at the change in our attitude toward serology we soon may be forced to make.

Whether the reader agrees or disagrees with many of the statements made in the book, it is a compilation of the present-day opinions of the great and near-great in the field of syphilology. It will be extremely interesting to compare these "facts" with the knowledge we will possess a few years hence.

Taken as a whole, this book represents the most readable document on the current knowledge of the various phases of syphilis treatment in print today.

R. M. S.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1940

American Medical Association, Chicago, 1941. Price, \$1.00.

This volume contains not only all of the published reports of the Council for the preceding year but also reports on products which were not deemed important enough to be published in the JOURNAL. Council reports may be classified in general as those of omission or rejection, preliminary reports and status reports on drugs or on various therapeutic and pharmacologic problems. Representatives of all classes appear in this volume.

There are a number of interesting reports in the "non-acceptable" category. The one on the widely exploited neurosine of the Dios Company sounds a timely warning on the hazards of bromidism and uncontrolled hypnotic medication. The report rejecting a number of preparations of gonadotropic hormone from the serum of pregnant mares, together with the report rejecting certain ovarian and ovarian anterior pituitary preparations, attests the Council's continued critical interest in the field of endocrinology. This is also indicated in the report on desoxycorticosterone. The Council finds adrenal cortex therapy now in an unsatisfactory and unsettled state.

Two reports relegate to the therapeutic scrap heap, the drugs isacen and melubrin: isacen was accepted in 1926 as a non-toxic laxative or purgative; melubrin is an anti-pyretic which seemed to have promise when it was accepted in 1913 but which the manufacturer has now ceased marketing. It is interesting to note that at the time these preparations were accepted the Council expressed some misgiving which later proved justified.

Noteworthy preliminary reports are on guanidine hydrochloride-calco, which has been proposed for use in the treatment of myasthenia gravis, and acetylglucosaminobenzene, a new antisyphilitic for intramuscular use, which the Council feels should be further perfected. In its report the Council comments with approval upon the manner in which the Winthrop Chemical Company has developed the latter and studied it before even considering its commercial production.

The report on the present status of the injection treatment of hernia is a continuation of the Council's consideration of this question. The Council has reached the decision that it is necessary to condemn the exploitation of the injection treatment of hernia by manufacturers of solutions. Another report which must be mentioned is that on lipocaic, a new pancreatic hormone concerned in some way with the normal transport and utilization of fat. The Council awaits development of further clinical evidence for lipocaic and expresses the opinion that the method should not be recognized for routine practice. Mention must be made of the excellent report on organic mercurial compounds as bactericidal agents, which states the Council's conclusion that no organic mercurial compound has yet been offered which will guarantee the destruction of spores under all conditions. Another valuable report is that on the promiscuous use of the barbiturates. This is a continuation of a previous study of the use of barbiturates in suicide. The present study is an analysis of hospital data.

One cannot even glance through a volume such as this without reflection on the great value of the Council on Pharmacy and Chemistry's work, which so richly deserves the support of all who are interested either directly or indirectly in the progress of medicine.

D. K.

HANDBOOK OF COMMUNICABLE DISEASES

By Franklin H. Top, M.D., Director, Division of Communicable Diseases and Epidemiology, Herman Kiefer Hospital and Detroit Department of Health. The C. V. Mosby Company, St. Louis, 1941. Price, \$7.50.

Together with seven collaborators from varied fields in communicable disease control, Dr. Top has written a very valuable reference book on communicable diseases. The book is composed of three sections. The first section deals with some "General Considerations Applicable to Communicable Diseases", in which are discussed infection and immunity, epidemiology, prevention, use of serums and their reaction and the management of communicable diseases both in the home and in the hospital.

Section II is a detailed discussion of all the communicable diseases based on a classification by common portal of entry. Portals of entry are given as the respiratory tract, gastro-intestinal tract, and mucous membrane or skin. Under the diseases which have the respiratory tract as a portal of entry are considered those diseases caused by bacteria and those caused by viruses. The diseases entering by way of the mucous membrane or skin are further classified as "touching diseases" such as gonorrhea and syphilis, contact infection or infestation, inoculation by trauma, inoculation by bites of insects or insect-like organisms and inoculation by bites of lower animals.

Section III is composed of an appendix and glos-

sary. The appendix is a series of tables relative to communicable diseases referred to in the text of the book. The glossary is a list of definitions of words used in the book so that the less well-informed reader will not become confused. The illustrations used, particularly the colored plates, are among the very best we have ever seen.

This book should be in the hands of every physician or nurse who has any contact with cases of communicable disease.

R. M. S.

NEW AND NONOFFICIAL REMEDIES, 1941

Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1941. American Medical Association, Chicago, 1941. Price, \$1.50.

New and Nonofficial Remedies is the book in which are described the medicinal preparations found by the Council of Pharmacy and Chemistry to be acceptable for the use of physicians. The book is cumulative; each year there are added the descriptions of products accepted during the foregoing year. Those taken off the market or found no longer worthy of continued acceptance are deleted. The book is at that time also revised to bring it up to date with the most recent medical thought. Until recent years the additions and deletions have been about balanced. Recently, however, the bulk of the book has been increasing and this year's volume represents the largest book of the more than thirty volumes which have been issued.

This year's new additions include the new sulfanilamide derivative, sulfathiazole, as well as sulfapyridine sodium; antipneumococcic rabbit serum of Types I, II, III, V, VII and VIII; human convalescent measles serum and human convalescent scarlet fever serum; and staphylococcus antitoxin. The field of endocrinology is represented by the addition of chorionic gonadotropin (follutein). The addition of shark liver oil reflects the search for new sources of Vitamins A and D caused by the cutting off of the foreign supply of cod liver oil. Other newly accepted preparations are ampules of camphor, diglanid and magnesium trisilicate.

The most extensive revision is represented by the rearrangement and amplification of the chapter on serums and vaccines. This chapter is now prefaced by a helpful index, an innovation in N. N. R. The chapter on vitamins and vitamin preparations for therapeutic and prophylactic use has been revised to keep it abreast of the newer developments in this field. Here, too, we find something of an innovation in the systematic use of graphic chemical formulas. It is understood that this practice will be extended to other parts of the book in future editions. Careful perusal will reveal minor revisions in many parts of the book made in the interest of greater clarity and in the effort to keep the book thoroughly up to date.

D. K.

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SOME ASPECTS OF THE RELATION OF THE KIDNEYS TO CARDIO- VASCULAR DISEASE†*

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Your president's very pleasant but all too generous introduction increases my embarrassment both at presenting a time-worn subject, cardiovascular renal disease, and at bringing you only results of experimental study, not yet sufficiently developed to be of real assistance to the physician in his daily work. All that can be hoped is that it may aid in providing specific approaches to this many-faceted disease complex and lead ultimately to better understanding of cause and therapy.

The studies to be recounted have been made during the past three or more years. Much of the real work was done by my associates, and Dr. McNamara will testify to the truth of this statement, for as you know he was an associate of mine years ago. So it is today, and merit for the content of this report rightly belongs to Dr. Ernst Mylon, Dr. Rolf Katzenstein, Dr. Levin Waters and Dr. Stanley Durlacher.

Due to limited time only brief reference can be made to the extensive literature. Like many others we were stimulated by the important contributions of Goldblatt.¹ These established the relationship, long contested, between the kidney and hypertension of both the benign and malignant varieties. By rendering the kidney ischemic, Goldblatt produced counterparts of arterial lesions as they occur in man in both these forms of hypertension.

In contrast to other experimental approaches, the studies to be presented in this paper were based at the outset upon the effects of complete removal of the kidneys. It is unnecessary to tell you the ultimate result. I recall a contribution entitled

extirpation of the heart in the frog embryo, with the conclusion "the animal dies". Of course, death results after removal of the kidneys, but the length of survival and its variation in different individuals, the rate of the rise of the blood non-protein nitrogen, the variation of blood electrolytes, and finally the absence of manifest morphologic changes, are significant.² This is particularly true when such a group of animals is compared with another group subjected to complete ligation of the renal arteries or ureters.³ The contrast is striking and indicates absorption from the kidney with ligated arteries or ureters as causatively associated with the more marked clinical and anatomic changes displayed by the latter group. This suggests that it may be possible to isolate substances related to particular changes from kidney tissue. The completed experiments to be reported strengthen this assumption.

Dogs survive removal of both kidneys for at least four, and occasionally as long as ten days; the blood pressure does not vary (proof that the kidney is not related to the maintenance of normal pressure of the blood); the blood non-protein nitrogen rises gradually and ultimately reaches very high values. At autopsy singularly few lesions are encountered; there is slight generalized edema, including an increase in the fluid content of serous cavities and an occasional small hemorrhage of the heart valve, lungs or other organs.

The question, what is the cause of death, may well be raised. In the electrocardiogram all three leads show disturbances in cardiac function and ultimately block. This is associated with a change in the blood electrolytes, primarily a rise in serum potassium to a level of ten or more milli-equivalents, a concentration shown by Hoff and his associates⁴ to result in similar variation in the cardiogram when potassium is introduced intravenously. Other electrolytes likewise are changed. Calcium, for instance, may drop so much that muscular irritability and contractions may simulate tetany or renal disease in which the unbound calcium becomes excessively low.

*From the Laboratories of the Department of Pathology, Yale University School of Medicine. Aided by a grant from the Commonwealth Fund.

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To ascertain further facts concerning the rôle of serum potassium, Durlacher⁵ fed rats on a diet low in potassium for three weeks before removal of their second kidney. He found that the second kidney of these rats increased far more in size than it did in controls allowed regular diets, a corroboration of experiments performed by Liebow and Tennant⁶ with mice. He found, moreover, that while the blood non-protein nitrogen of the rats given diets poor in potassium reached very high values, the serum potassium did not rise materially and that these animals survived approximately twice as long as those on a regular diet. In the latter group the blood non-protein nitrogen became only moderately elevated and the serum potassium rose rapidly to lethal levels. A publication in a recent number of the Proceedings of the Society for Experimental Biology and Medicine⁷ indicates that desoxycorticosterone acetate administered to rats prior to nephrectomy acts like the low potassium diet, a conclusion which might have been anticipated now that it has been proved.

These studies on electrolytes and renal disease are significant, as you will recognize, because of the approach they provide to the understanding of edema, serous effusions, muscular irritability, renal rickets and like phenomena of kidney disease.

Many contrasting facts are elicited when the main renal arteries are ligated, and the kidneys left *in situ*. The maximal survival period is four days, and death may occur in half this time. The blood non-protein nitrogen rise is more rapid, but due to the short period it does not reach nearly as high a level as after removal of the kidneys. It should be indicated here parenthetically that this fact strengthens the point of view that the blood non-protein nitrogen *per se* gives no indication of the presence of a specific deleterious fraction. The changes in serum electrolytes are likewise accelerated, and although they follow the same trend as after removal of the kidneys, the potassium may increase and cause heart block in three instead of six or more days, as after bilateral nephrectomy. A preliminary low potassium diet prolongs the life of the rat also after ligation of the renal arteries. So far this has not been corroborated for the dog.

After ligation of the renal arteries the dog's blood pressure tends to rise but the heights attained are not so great as after *partial* occlusion of the arteries. Moreover, after ligation of the ureters the blood pressure, as a rule, does not rise. All of these variants help to unravel particular problems and Goldblatt recently has shown that constriction of the ureters after hypertension has been produced by narrowing the arterial lumina, results in a return of blood pressure to normal levels.

Marked as are these differences in survival time, blood pressure, non-protein nitrogen and electrolyte change after removal of the kidneys and ligation of the arteries, even more striking are the extensive hemorrhagic and necrotizing lesions encountered in the latter as compared with the virtual absence of anatomic change in the former. In a dog which has died after ligation of the renal arteries, red discolorations in the form of splinters occur in all muscular hollow viscera. They may be superimposed upon each other at right angles where muscle layers are arranged longitudinally and circularly as they are in the intestine, or they may be much larger than the splinter form, round or oval, a centimeter or more in diameter. Many of these discolorations prove to be hemorrhages histologically, but others show only fresh muscle necrosis. This is important, for muscle necrosis, with or without hemorrhage and involving smooth muscle of hollow viscera, the walls of the arteries and veins and also the heart muscle, is a constant finding of renal insufficiency in the dog and with minor variation in man. Superimposed changes of both chronic and acute character eventuate in well-known lesions of human vascular disease.

The extent and distribution of the hemorrhages and necroses vary with individuals. For example, the myocardium may be involved in necrosis with or without hemorrhage, and the coronary artery branches may be quite intact. On the other hand the media of the coronaries may be the site of necrosis and the heart muscle itself may not be affected. You will recognize at once the value of these facts for the understanding of the old problem of primary myocardial fibrosis because these necrotic muscle fibers are replaced by scar.

The evolution of the lesion of the arterial media may be traced from necrosis of individual muscle fibers to groups of neighboring fibers and massive death of focal areas of the media. Accumulations of mononuclear and some polymorphonuclear cells occur in both the adventitia and the intima. They may lift the delicate intima so that it protrudes into the lumen and only rarely is the endothelium broken or involved by superimposed thrombus. These medial necroses are conspicuous histologically because they stain intensely with fuchsin and are more massive than the intact tissue they replace. This is due to accumulation of fibrin and dead wandering cells around the necrotic muscle fibers; the whole constitutes so-called "fibrinoid degeneration". This stains deeply by the Weigert fibrin technic and then it can be seen that perivascular exudation rich in fibrin accompanies the deposition of this material around the dead muscle fibers. Healing with fibrosis and superimposed exudation may then result in patterns of change in

the artery wall quite like those of malignant hypertension. The lesion is interpreted as acute when fibrinoid change is found in the wall of the vessel; the presence of fibrinoid material, together with fibrous thickening, indicates acute superimposed change.

If it is clear that the phenomena which follow removal of the kidneys are quite different from those which follow ligation of the renal arteries, one can easily grasp the significance of the next step, the injection of extracts of kidney into the nephrectomized animal. This was done with the idea of reproducing in the animal without kidneys the changes which follow ligation of the arteries.

It was soon learned that no essential differences resulted, whether the extracts were prepared from kidneys of animals several days after the renal arteries had been ligated, from normal kidneys of dogs, or from kidneys of several other species including man. They all reproduce in the nephrectomized dog the clinical and anatomic phenomena encountered after ligation of the renal arteries, that is, the shortened survival time, the accelerated changes in blood non-protein nitrogen and serum electrolytes, and also the anatomic changes, including hemorrhage and muscle necrosis. Since tissue extracts are used, other phenomena are encountered, each of which probably is associated with a specific fraction of the extract. In the presentation that follows, this thesis is fundamental. An effort will be made to indicate how far particular reactions have been related to specific substances in the extract.

Extracts of kidney, as was shown originally by Tigerstedt and Bergman,⁸ contain a pressor substance called renin. Page and his associates⁹ have partially purified this agent and their products are called Renin C and D. Injected into nephrectomized animals they elevate the blood pressure but also result in hemorrhage and muscle necrosis. Renin C and D contain protein and many enzymes, including the tryptic variety; incubation will greatly increase the non-protein nitrogen content. Renin C and D, therefore, must be regarded as a composite of different substances. Swingle¹⁰ has prepared a more refined renin, and at Yale Dr. Mylon has secured a still more active product, only 0.6 to 1.2 gamma content of nitrogen for each kilogram of body weight will raise the blood pressure thirty to fifty millimeters of mercury with a typical renin curve. Even Mylon's preparation is not a pure pressor agent and its chemical nature so far has not been determined. This may be said, however: it is specific for the kidney and no similar reactions are elicited from preparations prepared after the same method from liver, spleen, testicle or muscle.

The depressor effect of crude organ extracts is

more prompt than the pressor reaction and the immediate drop in blood pressure may be so marked that it completely masks the rise. Much work has been done on these blood pressure lowering agents of tissue extracts. To discuss them here would lead too far afield and reference is made to the critical study of those of the kidney by Landis and his associates.¹¹ Later a type of depressor reaction heretofore not stressed will be pointed out.

Now it is planned to bring to your attention the well-known effect of tissue extracts upon blood coagulation. You will recall how the surgeon uses a bit of muscle to stop capillary oozing, and you know too that tissue juices facilitate the conversion of fibrinogen into fibrin. Tissue extracts injected intravenously bring about like change with clot formation. They also cause agglutination of the platelets—white thrombi—but their effects do not stop here, as will be indicated now. The depressor substances may be removed from tissue extracts readily by various chemical or physical procedures. When preparations of kidney are treated by such means, pressor, hemorrhagic and necrotizing agents remain and the latter two manifest themselves by the lesions of muscle already described, including those of the blood vessels and heart. It will be recalled that no mention has been made of thrombus superimposed upon these vascular and cardiac lesions, in spite of extensive mural change. Thrombi are often lacking even when a massive lesion is covered only by the thin intimal endothelium. On the other hand if crude extract of kidney is used, thrombi result almost invariably; and this is true with extracts of other organs subjected to the same procedure as the kidney for removal of the depressor substance. Indeed, the resultant thrombi, free in the lumen of the vessels or attached at a point of hemorrhage or necrosis to the wall of a vessel, heart or valves, are quite constant. They occur promptly and when the animal survives their residua are found in organized or organizing lesions. They may thicken and distort valves so that they closely resemble chronic endocarditic changes.¹²

You would be interested in the moving picture record of the response to rapid intravenous injection. One cubic centimeter of crude kidney extract or a similar amount of a more refined product of the testicle causes even a large dog to develop labored breathing, nystagmus, loss of sphincteric control and convulsion. Without previous experiments one certainly would expect the animal to die shortly. This rarely is the case. After a few minutes the convulsions subside, and the exhausted animal recovers completely as a rule in half an hour. Singularly enough, if the injection is made

very slowly, all the effects enumerated above are avoided. It became evident gradually as these studies advanced that when death followed acutely after rapid injection, extensive thrombi were likely to occur in the right heart, pulmonary arteries and also in the portal vein. This led to the examination of the effect of different extracts on the clotting time of a standardized plasma-calcium mixture, as indicated in the table below.

The outstanding result indicated in the tabulation below is the variation in the clotting efficiency of the different organs before and after they are extracted with cold acetone and ether. The testicle especially retains a strong clotting factor and while this has not yet been purified, it seems to be a nucleoproteid phospho-lipid substance. Be this as it may, it is obvious that the thromboplastic substance of tissue extracts varies in extractability with different organs and that the symptomatology following injection of these various preparations is related intimately with their content of this coagulating agent.

It has been possible to confirm the old observation that injection of tissue extract may cause thrombus formation in the portal vein even when the peripheral vein remains quite free of such complication. This is attributed to the high lipid content of the portal blood after a hearty meal. It raises the interesting question concerning variation in the coagulation properties of blood in different parts of the vascular bed.

Of greater importance to the problems under discussion is the fact that injection of thromboplastic substance is followed promptly by a sharp drop in the clotting time and then within two more minutes by a prolonged delay or negative phase. A second rapid injection of many times the original amount may be given the animal when the clotting time is at the height of its negative phase with absolutely no resulting symptoms. The clotting time shortens, it is true, but does not reach dangerous levels and then it is again prolonged greatly to an hour or more only to return to normal very slowly. This negative phase may be considered as a physiologic compensating mechanism to prevent excessive clotting from minor vascular injuries.

The fact that no clot and no reaction followed a second injection of thromboplastic substance when the coagulation time of the blood was prolonged suggested the use of heparin. When heparinization is adequate no symptoms and no clot result from an initial injection of even large amounts of tissue extract rich in thromboplastic substance. Still another observation should be recorded here. With the kymograph it is easily demonstrated that injection of tissue extracts containing thromboplastic substance is associated with a sharp and prolonged drop in blood pressure; the reaction is quite similar to that produced by several milligrams of histamine. This drop in pressure is altered when the animal has had preliminary treatment with heparin. Then there is only a very

THE INFLUENCE OF TISSUE EXTRACTS ON THE CLOTTING OF A STANDARD PLASMA-CALCIUM MIXTURE
1 c.c. of 0.5% citrated plasma + 0.5 c.c. of 1.1% CaCl₂, clots in 6 minutes.
Saline extract of minced organs (Latapie).

Testicle pig		Lung pig		Kidney pig		Spleen pig		Muscle beef		Liver pig	
Drops	Clotting Time	Drops	Clotting Time	Drops	Clotting Time	Drops	Clotting Time	Drops	Clotting Time	Drops	Clotting Time
1	25"	1	50"	1	1'15"	1	2'10"	1	2'45"	1	2'40"
2	20"	2	30"	2	50"	2	1'50"	2	2'15"	2	2'10"
1	1'10"	1	1'20"	1	2'30"	1	3'45"	1	4'30"	1	3'45"
2	50"	2	1'5"	2	2'	2	3'30"	2	4'	2	3'15"
1	2'10"	1	3'	1	4'						(Saline dilution 1:100)
2	1'30"	2	2'10"	2	3'30"						
1	4'	1	4'40"								(Saline dilution 1:1000)
2	2'40"	2	3'10"								
2% saline extractive of dry powder after treatment of minced organ with acetone and ether.											
1	45"	1	2'15"	1	4'15"	1	4'30"	1	7'30"	1	3'30"
2	40"	2	1'30"	2	3'15"	2	4'	2	7'30"	2	2'30"
1	1'20"	1	3'30"	1	5'30"	1	6'30"			1	4'30"
2	1'15"	2	2'45"	2	5'	2	8'			2	4'20"
						4	12'				
						8	16'				(Saline dilution 1:10)
1	2'45"	1	5'30"							1	6'
2	2'15"	2	4'30"							2	5'30"
1	3'40"										(Saline dilution 1:100)
2	3'15"										(Saline dilution 1:1000)
1	4'50"										(Saline dilution 1:10,000)
2	4'15"										
0.410 gm.		0.237 gm.		0.268 gm.		Dry weight of 5 cc. of the undiluted organ extract					
0.044 gm.		0.004 gm.		0.003 gm.		Lipid residue after extraction with ether.					

slight and transitory fall, the equivalent of 50 gamma of histamine, and due no doubt to the histamine and histamine-like substance present in all tissue extracts. The relation between the clot formation caused by tissue extract and the marked and protracted vasodepressor effect, which simulates shock in many details, is not yet understood. It offers a fruitful field for hypothesis, since it indicates that clotting is not only followed by a negative clotting phase of the blood but that it also causes dilatation of smaller vessels to slow the current. Both of these phenomena may be interpreted as protective mechanisms as long as the response is within physiologic boundaries. It is possible that death from pulmonary emboli may be caused not only by blocking the lesser circulation but that dilatation of vessels and vasodepressor effects upon the general circulation may be significant associated factors.

The preceding discussion of the thrombus-producing properties of tissue extracts arose out of studies on the depressor effects of these extracts. Before dismissing the thrombus question it should be pointed out that bacteria as well as tissue extracts vary in their ability both to form fibrin from fibrinogen and to redissolve fibrin. These phenomena should be considered more specifically as possible explanations of particular morphologic changes such as the inconspicuous and often absent endocardial vegetation of rheumatic carditis, the resolution of the swollen articular and periarticular tissues in this same disease, and the large soft friable vegetations of valvular disease due to pyogenic cocci.

As a background to the last phase of the studies to be detailed now, it is desirable for you to have in mind the results of bilateral ureteral ligation. The kidneys become swollen, the capsules infiltrated with fluid blood and fibrin. The surface of the kidney shows many dark purple or pale yellow infarct-like markings. These are frequently true infarcts and are associated with thrombi more frequently occluding the arcuate and larger veins but occasionally also involving the arteries. The dilated pelvis contains blood-stained cloudy fluid and its wall, covered with a grumous mass of varicolored dark red to golden yellow crumbly material, merges insensibly with the discolored necrotic lower portion of the pyramid. Microscopic study confirms the gross picture of thrombi and extensive hemorrhagic necrosis. This acute hydro-nephrotic kidney is not a simple dilatation of the pelvis from retained secretion. It is also extensively damaged and repair of such change, should survival allow, offers an adequate basis of explanation for the variation of these chronic processes in man.

The extent of the lesions can be reduced greatly as has proved to be the case if the animal has received a course of treatments with intravenous tissue extract prior to the ligation of his ureters. Moreover, they can also be modified in the same direction by the intravenous use of serum from another animal that has had protracted intravenous therapy with tissue extract. As these studies have progressed it seems that this protection is not organ-specific from the standpoint of the tissue extract used. This phase of the investigation seems promising and should be pursued.

Before bringing the presentation to a close, let me show you a few illustrations of cardiorenal vascular disease in man. Some of the histologic changes are indeed facsimilies of the lesions already brought to your attention in the experimental studies.

The first of these is an example of periarteritis nodosa occurring in a man forty-nine years of age who had suffered for years from hay fever and later from asthma. It illustrates well the focal hemorrhagic medial necrosis of arteries, the associated adventitial destruction and cellular infiltration and also the intimal thickening. This may be complicated by identifiable superimposed thrombus.

The second is a characteristic example of malignant nephrosclerosis occurring in a fifty-nine-year old patient. After many pregnancies she was found, three years before death, to have hypertension. The lesions of the arteries and arterioles, particularly of their muscle coats, and the fibrinoid material in their walls, are striking.

The third and final case is one of so-called symmetrical cortical and renal necrosis occurring in a woman twenty-two years of age, known to have been quite well until four months before death, when she had obscure abdominal pain. The blood pressure and urine examinations revealed nothing abnormal. Two months later the clinical picture was markedly changed. Many evidences of vascular disease, involving particularly the kidneys and the brain, had developed, and this was shown to be true later by anatomic study. The cause of the necrosis of the kidney is not understood but absorption of materials from such necrotic renal tissue repeats the clinical and anatomic story that follows ligation of renal arteries in animals.

In closing let me re-emphasize the many different factors involved in the story of cardiovascular renal disease. Terms like uremia will be more valuable if it becomes possible to ascertain chemical substances that are responsible for particular manifestations of this symptom complex, for example, the effect of potassium upon the heart, and the influence of calcium ion upon neuromuscular sensitivity. Terms like hypertension, particularly

in vogue today, are not in themselves adequate. Individuals live with markedly elevated blood pressures for many years; so do experimental animals. Is high blood pressure in itself dangerous to health and life? Should it be lowered as was done for hyperpyrexia years ago? Is the hypertensive agent of the kidney also responsible for the vascular lesions or are the latter caused by closely associated but independent derivatives from this organ? Why are these vascular wall necroses so frequently hemorrhagic? Is this a manifestation of exudation of which the degeneration commonly called fibrinoid is another example? Questions of this type are without end and lend themselves to study. Let us hope this will be profitable and that when you are next addressed on these subjects more helpful information will be available.

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NEWER DRUGS IN OPHTHALMOLOGY AND OTOLARYNGOLOGY

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In the past few years there has been such a marked advance in chemotherapy that it is well at this time to bring a recapitulation and evaluation of the subject to this group.

Ophthalmologists and otolaryngologists as a group have not been slow in putting some of these newer drugs to the test to determine their value in clinical therapeutics. Some have more than stood the tests imposed, while others have been cast aside as not coming up to the claims of their sponsors or being too dangerous to use in clinical work.

Probably the most outstanding substance in chemotherapy of use to the practitioner of ophthalmology has been the sulfonamide group. Among the eye conditions benefited by this drug are trachoma; inclusion body blenorhea; various types of conjunctivitis due to certain specific bacteria, such as the gonococcus, streptococcus, pneumococcus and staphylococcus; gonococcal iritis; orbital cellulitis due to streptococcus; erysipelas; and the ocular complications of meningococcal infection.

In the field of otology the use of the drug has become so routine that many cases of mastoiditis are cured by the medical treatment rather than by surgery. Although many of these patients have almost as stormy a period of recovery from the present medical treatment as they did under surgical treatment, no otologist would feel today that a case of streptococcus middle ear infection was adequately treated unless sulfanilamide or one of its derivatives had been used.

During the early days of sulfanilamide therapy, various methods of administration were used with varying degrees of success. Various ointments, powders and drops of the drugs were applied locally to the eye in addition to the oral administration. The chief advantage claimed from the local administration was the avoidance of systemic reactions, some of which proved exceedingly serious. It has now been rather definitely proved that local applications provide such a low concentration of the drug that they are of little or no value in the treatment of eye conditions. Unless one is dealing with an overwhelming infection or an excessively virulent organism, present knowledge shows that good results can be obtained from much smaller doses than those commonly employed. The drug may have to be used over a longer period of time, but there is less danger of serious systemic reactions, and the patient may continue in an ambulatory state. With the advent of the newer derivatives one is enabled to make a selection of the drug to be used in dealing with a specific infection.

Present knowledge leads to the use of sulfanilamide as the drug of choice in the hemolytic streptococcal infections, wherever they may be located, and in trachoma and inclusion blenorhea. Sulfa-pyridine is the most efficacious in pneumococcal infections and sulfathiazole in staphylococcal and gonococcal infections. These statements require a certain amount of qualification. Of these three drugs, sulfathiazole is the least toxic and is best tolerated by mouth. It is known to influence favorably the streptococcus, pneumococcus, staphylococcus and gonococcus, but as yet there appear no very conclusive evidences of its effect on either trachoma or inclusion blenorhea. The reasonable

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supposition would be that, in view of later research, either sulfathiazole or a newer derivative will replace sulfanilamide in therapeutics, due to the lessened toxicity. Spectacular results in trachoma, in the acute conjunctivitis and in certain types of chronic conjunctivitis of bacterial origin, have been obtained with the use of sulfanilamide. However, equally favorable results have been reported in certain types of corneal ulcer, notably *ulcus serpens*, with the use of sulfapyridine.

In the field of otolaryngology the above choice of drugs holds true in respect to the type of infection present. The promiscuous administration of any drug as powerful as sulfanilamide is nothing short of criminal, and when employing the drug one should keep the patient constantly under control and observation. This means hospitalization, daily blood counts and the other necessary regulations which ensure a safe rapid recovery.

Almost as spectacular as the rise of the chemotherapeutic agents in ophthalmology and otolaryngology has been the use of the vitamins. At the present time only Vitamin C can be estimated quantitatively in the body, although deficiencies in Vitamin A are estimated by means of the biphotometer and in Vitamin K by means of the prothrombin determination. It is entirely probable that definite measurements of vitamins in the body will be developed in the future.

The treatment of such outstanding Vitamin A deficiencies as those characterized by night blindness, xerophthalmia and keratomalacia is so well understood as to require no comment. In this connection the writer would like to report the favorable influence of Burbot liver oil, which contains Vitamins A and D, used locally in catarrhal ulcers of the cornea, old chronic corneal ulcers and after the removal of foreign bodies or in cases of abrasion of the cornea. Experience shows a marked reduction in the recovery time in such cases.

Factors of the Vitamin B complex, composed of thiamin chloride, pyridoxin, riboflavin, nicotinic acid and several other components, are definitely useful in the field of ophthalmology. It has been suggested that the benefits arise from the vasodilator properties of the complex. However, since the physiologic effects of each of the component factors are not known, it is best to employ one of the preparations which embodies the whole complex in treating deficiency conditions due to a lack of Vitamin B. Brewer's yeast has the combined advantage of containing all the factors and being relatively inexpensive. Some of the preparations are so expensive as to be almost prohibitive. Many authorities treat all forms of optic neuritis with the Vitamin B complex, supplemented by such vasodilator drugs as mecholyl, padutin or erythrol

tetranitrate. The best results have been obtained in the treatment of tobacco and alcohol amblyopias. It has also been used in the treatment of diseases of the peripheral nerves, as in herpes zoster, and has been tried in the treatment of certain types of deafness, but the consensus seems to be that the results do not bear out the claims of the sponsors.

Vitamin C preparations have been used in combating hemorrhages. Here one can proceed rationally because of the possibility of making accurate determinations of the Vitamin C content in both the blood and urine. Retinal hemorrhages in young individuals should be investigated from the Vitamin C deficiency standpoint, as well as from other angles. Vitamin B complex and Vitamin C offer a definite treatment in the case of diabetic retinitis. The daily dosage of 150 milligrams of cevitamic acid before and after cataract surgery seems to be a factor in the prevention of postoperative hyphemia. The claim that Vitamin C is effective in the treatment of incipient senile cataract has not been definitely substantiated. Neither has the relationship of the formation of senile cataract and vitamin deficiency been entirely proved.

Some individuals suffering from intra-ocular hemorrhage, whose prothrombin time is abnormally long, benefit from the use of Vitamin K and bile salts. Hence in all cases of intra-ocular hemorrhage the possibility of both Vitamins C and K deficiency must be borne in mind.

Duggan in a recent article advocates the use of vasodilators, particularly the nitrates, in the treatment of optic neuritis, acute iridocyclitis and embolism of the central artery. Among the drugs are mecholyl and doryl, acetyl choline derivatives, padutin, a pancreatic tissue extract, the various nitrates, and especially erythrol tetranitrate because of its prolonged action and its ease of oral administration.

Recently Scal reports on the use of prostigmine in otology and gives an analysis of the treatment of 40 otologic patients. He says, "All those suffering from the Ménière symptom complex were definitely improved and forty-five per cent of those suffering with tinnitus aurium were afforded definite relief. Prostigmine has also proved of great value in glaucoma cases, which are intolerant to pilocarpine, the drug causing a mild degree of miosis."

Very recently Horton reported on the use of histamine in Ménière's disease. His report dealt with 49 cases of Ménière's syndrome at the Mayo Clinic. All of the patients had vertigo, 33 had tinnitus, and 32 showed some impairment of hearing. Following the intravenous administration of histamine all were relieved of vertigo, nausea and vomiting. A small number reported improvement in hearing and less than 50 per cent showed im-

provement in the tinnitus. At the time of his report fifteen of these patients were known to be well. The acute symptoms are treated by preparing a solution consisting of one milligram of histamine base in 250 cubic centimeters of physiologic saline solution for injection. This is injected intravenously at the rate of fifty to sixty drops per minute by the gravity method, about one and one-half hours being required for the injection. If the symptoms do not subside the dose is repeated on successive days. As a preventive for further attacks Horton suggests an adequate maintenance dose of histamine, 0.1 to 0.2 of a milligram subcutaneously two to four times a week. He believes the ultimate treatment of Ménière's syndrome will be medical and not surgical. In speaking of histamine one should mention the work being done by many investigators on the use of the drug in the allergic states. At the present the consensus seems to be about fifty-fifty as to the benefits obtained from its use.

In the field of refraction paredrine has been widely used along with homatropine. It produces a wide dilation of the pupil with adequate cycloplegia for retinoscopy and static refraction. Experience shows a practical return to normal within twenty-four hours, with no increase in ocular tension or any irritation of the eyes or nasal mucosa. Needless to say the drug does not replace atropine in refraction of squint cases or the very young individuals, but in everyday office refractions it has proved to be a valuable adjunct.

In the field of anesthesia pontocaine should be mentioned as perhaps the local anesthetic of choice in the field of ophthalmology and otolaryngology. Since it is less toxic than cocaine, it has almost entirely supplanted that drug both in eye and nose and throat surgery. Very few cases of sensitivity to the drug have been reported in the literature at this date. In the general anesthetic field several papers have appeared recently on pentothal sodium in ophthalmology. The drug seems to be comparatively safe in the hands of an experienced anesthetist, and has the decided advantage that the anesthetist is completely out of the field of operation. It can also be used in the presence of suction apparatuses and cauteries, since there is no danger of explosions from sparks. To date it has been used mainly in short operations about the eyes and face, but with further experience it may prove the general anesthetic of choice for the ophthalmologist.

CONCLUSIONS

1. An attempt has been made to review and evaluate some of the newer drugs in present-day use in ophthalmology and otolaryngology.
2. Therapeutics in the field are changing so

rapidly one must be always on the alert in order to give the patient the benefit of advances in the specialty.

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Discussion

Dr. William P. Hofmann, Davenport: In Dr. Tait's treatise on the newer drugs used in ophthalmology and otolaryngology, we have had presented to the profession a very careful and extensive review of the literature. Little is left for the discusser other than repetition, which is often necessary to impress upon us the value of these therapeutic measures.

Chemotherapy should be our first line of defense when we are confronted with a complicating middle ear infection. I do not favor the routine use of the sulfonamide group in all otitic infections, but reserve it for cases where complicating symptoms are impending. The use of the sulfonamide drugs carries with it hazards which we all recognize. Among these are toxic reactions which may occur at any time. Some are serious, others are more serious, including anemia and leukopenia. They have the disagreeable habit of masking mastoid symptoms, and this type of medication should not be carried out in preference to paracentesis of inflamed and bulging drum membranes. In such instances, we will frequently be confronted with cases presenting extensive osteomyelitis in the mastoid, accompanied by chills, high temperature and high white blood count to the point of complications.

I am in accord with Dr. Tait's evaluation of chemotherapy, and feel we should not hesitate to use it when we have a severe infection of a character which so readily responds to this kind of medication. Among these we may include meningitis of whatever origin and also brain abscess. The maximum dosage should be used during the initial stages with a gradual decrease in dosage as the symptoms abate.

In imminent peritonsillar infections, following tonsillitis, I have repeatedly used chemotherapy in maximum dosage with all clinical symptoms subsiding in a few days. Of the sulfonamide group, sulfathiazole seems to be less toxic, and is prescribed in practically the same dosage as the others. I was glad to note in Dr. Tait's paper that good therapeutic results could be obtained by much smaller doses than are usually prescribed. Especially is this true in the milder type of infections, particularly infections of the conjunctiva, such as trachoma. After careful study of literature on ophthalmology, I believe the sulfonamide drugs have some therapeutic value in all ocular infections.

Through the medical literature vitamin therapy has attracted our thought and study. Many of these

vitamins are of paramount importance in ocular therapy. Among these may be mentioned the use of Vitamin A in the treatment of night blindness, dryness of the conjunctiva, xerophthalmia, keratomalacia and blepharitis. It is also indicated in conditions of scrofulous origin. I am convinced that many of the general clinical symptoms, as well as the ocular symptoms, are due to a vitamin deficient diet, employed by many of our young women today, in an effort to keep a streamlined figure. Stephens and Baer state they believe there is little evidence to show that any part of the population is suffering from Vitamin A deficiency such as is reported in current literature.

I do not recall that the essayist mentioned anything concerning the treatment of deafness with sex hormones. Chronic progressive deafness (otosclerosis) begins in the early part of life, at a time when endocrine functions have a marked influence on bone formation and development. Any disturbance of this function can be supplemented by injecting these hormones. In otosclerosis we frequently have disturbances of the sexual functions. Prager treated 72 cases of otosclerosis with male and female hormones, improvement resulting in fifty per cent and relief of tinnitus in practically all.

Another valuable therapeutic agent, although it may not be entirely one of the newer drugs, is the Typhoid H Antigen. This is a type of intravenous ocular therapy especially applicable to diseases of the anterior part of the eye, but it may be used as a foreign protein in any ocular inflammation. It has a distinct advantage in that it is unnecessary to have the patient confined to the hospital. The injections may be given in the office, the patient returning home and remaining in bed for twenty-four hours. The Typhoid H Antigen, when given intravenously, results in a satisfactory nonspecific response which is noted, as a rule, for its freedom from undesirable symptoms.

In the field of refraction, the homatropine benzodrine combination seems most satisfactory. It is a good practical cycloplegic that, of course, does not take the place of atropine. I have been using this type of cycloplegic for three years, and have had excellent results with it, although I find a small amount of residual accommodation in many cases. This is probably due to the manner of instilling the drug and the behavior of the patient, which prevents our procuring the ideal cycloplegic. I believe Jackson states that the cycloplegic should be instilled above the cornea permitting it to run down over the surface of the same. Many times a drop will be put in the eye, and the patient will immediately have a spasm of the lids forcing out most of the medicine. Therefore we cannot expect full effects of the medication.

I use five per cent homatropine at five-minute intervals followed five minutes later by one drop of the

paredrine solution. We should obtain practical cycloplegia in forty-five minutes to one hour. It is necessary and important that the patient be refracted at the end of this time, since the accommodation often begins to return after this hour.

At the end of eight hours, most of the patients are able to read, and with the installation of one per cent eserine the accommodation is restored in a much shorter time. The adrenergic action of the benzedrine seems to have a definite clarifying effect on the cornea as well as increasing the dilatation of the pupil. Both of these factors are a definite aid in the use of the ophthalmoscope and retinoscope.

During the school year, in children under sixteen years of age, I use atropine one per cent, two installations at five-minute intervals, and one drop of paredrine five minutes later. This gives practically complete cycloplegic results which I confirmed in many cases by using atropine three days, and then doing a second retinoscopy. This is a distinct advantage to a school child, since it can be done on Friday evening and the patient can resume his school duties the following Monday.

Dr. John E. Rock, Davenport: Sulfanilamide and its cousins still present a problem, especially in otology, since each one is capable of slowing down organisms and as a result, I suppose, of the inability of the natural body resistance to finish them off, a localized abscess in the mastoid has resulted in almost everyone's experience. The process seems to continue in a low grade manner and bone necrosis especially of the inner table continues. This action can lead us into a false sense of security and it is quite a blow to open one of these mastoids and find the entire inner plate gone.

While, perhaps, the number of surgical mastoids is less than before the sulfonamide drugs, they certainly have not eliminated the procedure and this winter we had just about as many suspected mastoiditis patients recover without the drug as we did last winter with its use.

Someone has said never to give these drugs after suppuration had begun, that is, after myringotomy, and while this statement is probably somewhat sweeping in character, I venture the opinion that time will make all of us give it a great deal of consideration.

At any rate, when the pediatrician and general men see these otitis cases early and prescribe the treatment, the results are very pleasing, even though they do it somewhat blindly because of their inability to get the real bacteriologic picture of the middle ear condition before it is opened.

Recently the sodium salt of sulfathiazole has come into notice and our early limited experience would seem to indicate that it will have some value in chronic sinusitis and in certain types of conjunctivitis.

CANCER FROM A GYNECOLOGIC VIEWPOINT*

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In this symposium on cancer it is fitting that we consider the subject from a gynecologic viewpoint, since twenty to thirty per cent of all malignancies in women occur in the genital tract. Female genital cancers are important not only from the standpoint of frequency, but because they are more easily diagnosed and treated with better results than many malignancies elsewhere in the body.

TABLE I

Distribution of 744 Malignancies of the Female Genital Organs
At S. U. I. Hospital from July 1, 1926 to July 1, 1936

Location	Number of Cases	Per cent
Carcinoma of the cervix.....	478	64.25
Carcinoma of the body.....	122	16.40
Carcinoma of the ovary.....	85	11.42
Carcinoma of the vulva.....	25	3.36
Carcinoma of the vagina.....	18	2.42
Sarcoma of the uterus.....	9	1.21
Chorio-epithelioma	6	.81
Carcinoma of the tube.....	1	.13
Total	744	100.00

Uterine carcinoma is the most important and most common gynecologic cancer and accounts for eighty per cent of all female genital malignancies. Eighty per cent of all uterine carcinomas occur in the cervix. Most cervical cancers (93 per cent) are of the epidermoid type and usually begin in the region of the external os where the epithelium is constantly changing in the formation and healing of erosions. About seven per cent are adenocarcinomas which often begin in the cervical canal.

TABLE II
Carcinoma of the Cervix

Histologic type	Number of cases	Per cent	Five-year survivals	Per cent
Epidermoid	409	92.74	111	27.13
Adenocarcinoma	32	7.26	7	21.87
No biopsy	37		0	0.00

Little is known concerning the etiology of cervical cancer. Some gynecologists feel that infections, lacerations and erosions of the cervix are important etiologic factors while others greatly minimize their significance. Cervical cancer occurs most frequently between the ages of forty and fifty or at the time when most women are going through the menopause. However, it is not uncommon to see this type of carcinoma before thirty and it is frequently a postmenopausal disease. The majority occur in parous women, but it is doubtful if childbearing in itself has much significance.

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TABLE III

Age Group	Age Incidence in Cancer of the Cervix	Number of Cases
20-29		21
30-39		107
40-49		167
50-59		107
60-69		64
70-79		12
Total		478

Oldest patient 78
Youngest patient 21
Average age 47.1

TABLE IV

Parity in Cancer of the Cervix

	Number of Cases	Per cent
Nulliparas	40	8.4
Multiparas	438	91.6
Average number of pregnancies..4.2		

Cervical cancer produces only two symptoms of importance, irregular vaginal bleeding and leukorrheal discharge. In seventy-five per cent the first symptom is a bloody discharge. Therefore, any vaginal bleeding which is not typical of normal menstruation or any unusual vaginal discharge should demand a thorough pelvic examination. Forty per cent of all cases of postmenopausal bleeding will be due to cervical cancer. Obviously pain, loss of weight and urinary symptoms are of no practical importance because when they occur cervical cancer is beyond control.

TABLE V

First Symptoms in Cancer of the Cervix

Symptoms	Number of Cases	Per cent
Abnormal bleeding	366	76.6
Leukorrhea	89	18.6
Pain	16	3.3
Miscellaneous	7	1.5

Bleeding, although it is most often the first symptom, occurs in many cases only when the disease is far advanced. In a recent review of 78 patients who had had bleeding as a symptom for two months or less, it was found that 65.4 per cent of the patients belong to Groups III and IV. Therefore, in order to solve the cervical cancer problem, it will be necessary to diagnose the disease before symptoms have developed. It should be the practice of every physician when performing a routine physical examination to include the genital tract as well as the rest of the body.

TABLE VI

78 Cases of Cervical Cancer with Bleeding as a Symptom for Two Months or Less

Group (Schmitz)	Number of Cases	Per Cent
I	8	11.5
II	18	23.1
III	37	47.4
IV	14	18.0
Total	78	100.0

A cervical cancer capable of producing symptoms can usually be diagnosed by palpation and careful visual examination. Any lesion on the cervix which bleeds easily or admits a probe is sug-

gestive of cancer. The symptomless or early cervical cancer is more difficult to diagnose. Therefore, we must make it a practice to remove a small piece of tissue for biopsy whenever a suspicious area of redness is seen around the external os or when a small area on the portio does not stain with an aqueous solution of iodine.

Treatment of cervical cancer is irradiation therapy. Most clinics still depend upon radium for the destruction of the local lesion and deep x-ray therapy for parametrial and lymphatic spread. It seems more advantageous, especially in the advanced cases, to begin treatment with x-ray therapy and later destroy the local cervical cancer with radium. In recent years some radiologists have treated the cervix transvaginally with x-radiation as well as the parametrial and lymphatic regions through the skin. Although results with this method of treatment have been encouraging it probably will not replace the more established method of treatment with radium and x-ray.

The simple total hysterectomy has been unwisely employed by some surgeons in the treatment of cancers which seem to be localized to the cervix. This type of operation is not advocated by any authority as a method of treatment even for extremely early lesions of the cervix. When one considers the fact that so-called operable lesions have lymphatic metastases in one-third of the cases and non-palpable parametrial spread in at least one-half, the inadequacy of simple total hysterectomy is apparent.

At the University Hospital, Iowa City, Iowa, we have 478 cases of cervical cancer for which we can report a five-year survival rate of 24.68 per cent. This includes a ten year period from July 1, 1926, to July 1, 1936. These results seem quite low; the encouraging feature is that the survival rate for the last two and one-half years of this period was 35.63 per cent for 174 cases.

TABLE VII
Results of Treatment of Carcinoma of the Cervix
at S. U. I. Hospital from
July 1, 1926, to July 1, 1936

Group (Schmitz)	Number of Cases	Five-Year Survival	Per Cent
I	29	26	89.65
II	76	44**	57.89
III	232	48*	20.68
IV	141	0	0.00
Total	478	118***	24.68

Treated entirely
at S. U. I. 384 111** 28.90
Treated partially
at S. U. I. 94 7* 0.74
* One patient alive but had questionable recurrence.
** Two patients alive but had questionable recurrence.
*** Three patients alive but had questionable recurrence.

There were eleven cases of carcinoma of the cervical stump in patients who had previously undergone subtotal hysterectomy. All of these patients developed symptoms at least two or more years after they had their operation. The five-

year survival rate for this group of patients was 54.54 per cent. It has also been the experience of other clinics that the salvage in stump carcinomas is greater than it is in cases in which the corpus has not been removed.

TABLE VIII

Results of Treatment of Carcinoma of the Cervix at S. U. I. Hospital from January 1, 1934, to July 1, 1936			
Group (Schmitz)	Number of Cases	Five-Year Survival	Per Cent
I	18	16	88.88
II	30	20**	66.66
III	89	26*	29.21
IV	37	0	0.00
Total	174	62***	35.63

Treated entirely
at S. U. I. 142 56** 39.43

Treated partially
at S. U. I. 32 6* 18.75

*One patient alive but had questionable recurrence.

**Two patients alive but had questionable recurrence.

***Three patients alive but had questionable recurrence.

TABLE IX

Results of Treatment of Carcinoma of the Cervical Stump			
Group (Schmitz)	Number of Cases	Five-Year Survival	Stump Per Cent
I	2	2	100.00
II	3	3	100.00
III	6	1	16.66
IV	0	0	0.00
Total	11	6	54.54

The most important factor in the prognosis of cervical cancer is the stage of the disease to which it has advanced. Early lesions or Group I carcinomas are curable in at least eighty per cent of the cases. The histologic type of cancer and the immaturity and radiosensitivity of the cells are less important. Factors such as the type of local lesion, the presence of infection in the growth and the general condition and age of the patient are important but less significant than the stage of the disease.

Carcinoma of the body accounts for 16 per cent of gynecologic cancers. It occurs most frequently between the ages of fifty and sixty and is essentially a postmenopausal disease. Less than five per cent occur before forty years of age. The disease seems to be favored by nulliparity for 20 to 30 per cent have never been pregnant. Irregular bleeding is the only symptom of importance and

TABLE X

Age Incidence in Cancer of the Body of the Uterus	Number of Cases
Age Group	
20-29	1
30-39	4
40-49	22
50-59	51
60-69	36
70-79	7
80-89	1
Total	122
Oldest Patient	81
Youngest Patient	28
Average Age	55.8

TABLE XI

Parity in Cancer of the Body of the Uterus	Number of Cases	Per Cent
Nulliparas	34	27.9
Multiparas	88	72.1
Average number of pregnancies	2.6	

when it occurs the patient should be subjected to curettage if a pelvic examination reveals no malignant lesion in the lower genital tract.

TABLE XII

First Symptoms in Cancer of the Body of the Uterus	Number of Cases	Per Cent
Symptoms		
Abnormal Bleeding	116	95.1
Leukorrhea	6	4.9

The treatment of corporal carcinoma is now well standardized. Irradiation therapy, either intrauterine radium or deep x-ray therapy, should be given and four to six weeks later a total abdominal hysterectomy performed. The technic of the hysterectomy is important. The cervical canal should be packed with gauze and closed with sutures. The distal ends of the fallopian tubes are ligated as soon as the abdomen is opened. The entire uterus and the adnexa on each side are removed with a minimum of trauma. Subtotal hysterectomy is inadequate treatment for body carcinoma. Patients who are poor risks for surgery should be treated only with irradiation ther-

TABLE XIII

Results of Treatment of Carcinoma of the Body of the Uterus at S. U. I. Hospital from July 1, 1926, to July 1, 1936			
Period	Number of Cases	Five-Year Survival	Per Cent
July 1926-July 1930.....	34	10	29.41
July 1930-July 1936.....	88	41	46.59
Total	122	51	41.80
Treated entirely at S. U. I. 93	44	47.31	
Treated partially at S. U. I. 29	7	24.13	

apy. The five-year survival rate of body carcinoma should approximate fifty per cent. In the period from July, 1926, to July, 1936, we treated in our hospital 122 corporal carcinomas with a survival rate of 41.8 per cent.

Ovarian carcinomas account for twelve per cent of female genital malignancies. They produce only two common symptoms, enlargement of the abdomen and abdominal distress. Any woman presenting either or both of these symptoms justifies a careful pelvic examination. Ascites, bilateral ovarian tumors and nodules in the cul-de-sac are suggestive of ovarian cancer. Ovarian tumors which occur after the menopause have a high rate of malignancy. In general any ovarian tumor larger than an orange even if symptomless should be removed. If smaller than an orange, it is likely to be a retention tumor and should only be observed from time to time unless it definitely produces symptoms.

The treatment of ovarian cancers is a combination of surgery and irradiation. The entire adnexa on each side and the uterus should be removed. Because of the difficulties of making a definite pre-operative diagnosis of carcinoma it is best to follow the operation with irradiation therapy. All cases diagnosed as ovarian carcinoma should be

explored unless the patient is a poor risk. Many times what appeared to be an inoperable carcinoma before operation turns out to be operable and less often proves to be a benign lesion.

During the ten-year period 1926 to 1936 we had 85 ovarian cancers and the five-year survival rate was 35.29 per cent. The prognosis is best in ovarian cancers which arise in previously benign tumors and poorest in primary and metastatic carcinomas.

TABLE XIV

Results of Treatment of Carcinoma of Ovary at S. U. I. Hospital from July 1, 1926 to July 1, 1936			
Period	Number of Cases	Five-Year Survival	Per Cent
July 1926-July 1930.....	14	1	7.14
July 1930-July 1936.....	71	29	40.84
Total	85	30	35.29

Vulvar carcinoma accounts for about four per cent of genital cancers in women. It usually begins in the skin of the clitoris or that covering the large labia. Most cases are preceded by leukoplakia. Since this lesion is often a precursor of cancer many gynecologists recommend vulvectomy for the treatment of leukoplakia. Vulvar carcinoma responds poorly to irradiation and therefore should be primarily treated by surgery. The entire vulva is removed and two weeks later a bilateral lymph node dissection according to the method suggested by Taussig is performed. Our five-year survival rate for 25 cases is 24 per cent. Since the year 1930 we have employed the more radical operation and the five-year survival has been 38.46 per cent.

TABLE XV

Results of Treatment of Carcinoma of Vulva at S. U. I. Hospital from July 1, 1926 to July 1, 1936			
Period	Number of Cases	Five-Year Survival	Per Cent
July 1, 1926-July 1, 1930.....	12	1	8.33
July 1, 1930-July 1, 1936.....	13	5	38.46
Total	25	6	24.00

Vaginal cancer represents two per cent of genital malignancies. They usually begin in the upper third of the posterior wall of the vagina, and produce symptoms similar to those of cervical cancer. Treatment consists of a combination of radium and x-ray therapy. The five-year survival rate in our hospital has been 5.5 per cent for 18 cases.

Sarcoma of the uterus occurs in one to two per cent of genital malignancies. They arise in the muscle wall of the uterus, in the endometrium and in fibroid nodules. The treatment is complete hysterectomy along with removal of the entire adnexa. The prognosis is poor except for those which begin in fibroid nodules. Most of the cases at our hospital have been of this type and the five year survival rate for nine cases has been seven or 77.7 per cent.

Chorio-epithelioma makes up less than one per

cent of genital malignancies in women. Most follow hydatid moles and the remainder are derived about equally from uterine abortions and full term pregnancies. Treatment consists of complete hysterectomy and the removal of the entire adnexa on each side. The five-year survival rate for six cases during the ten-year period under consideration has been fifty per cent.

Carcinoma of the tube is one of the rarest genital malignancies and justifies little discussion in this symposium. It is usually not diagnosed before operation and when discovered should be treated the same as an ovarian carcinoma.

CANCER OF THE PROSTATE GLAND*

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Cancer of the prostate gland is of rather common occurrence, there having been 263 deaths in the state of Iowa in the past year attributable to this cause. It is noteworthy that almost all of these deaths occurred in patients over fifty years of age. Several exhaustive studies have been made recently with remarkable agreement on the age incidence of prostatic cancer, all investigators agreeing that this disease rarely occurs in patients under fifty years of age. Of one thousand cases reviewed by Bumpus,¹ in only four did cancer of the prostate gland occur before the forty-fifth year. Investigators also agree that the average age incidence is about the sixty-fifth year. Of the 263 deaths in this state last year, 228 occurred in men sixty-five years of age or older. The absolute incidence of cancer of the prostate gland, however, appears to increase with age, and Moore² found the highest incidence within any age group to be in the ninth decade. This tendency for cancer of the prostate gland to occur more frequently as age increases may constitute a real problem if the average span of life continues to become longer.

In an attempt to determine just how often cancer of the prostate gland did occur in a representative series, I checked back over one hundred consecutive patients upon whom I had operated for prostatic obstruction and found that in ten of them there was malignancy in the gland. This number is in accord with the general clinical incidence, but is at considerable variance with the pathologic incidence, which is given as much higher. The most recent extensive study has been made by Kahler,³ who found the incidence of cancer of the gland at autopsy, in men over fifty years of age, to be 17.3 per cent. Even higher figures have been given by other investigators, notably Moore, who found 21 per cent of malignancy in the same age group.

This discrepancy between a clinical incidence of about ten per cent and a pathologic incidence of 17 to 21 per cent is not difficult to evaluate when one considers that this high incidence of malignancy is found only by studying the entire prostate gland, using the serial section or the step section method so as to discover even the minutest growth. Using this method, Kahler found not only malignancies which were not suspected clinically, but also malignancies which had been overlooked at autopsy. In fact, of the 195 carcinomas he studied, only 37 per cent had been suspected clinically; another 35 per cent had been discovered at autopsy; and the additional 28 per cent were diagnosed only by exhaustive microscopic sectioning of the gland. These figures are in agreement with those of Rich,⁴ who found that two-thirds of the cancers of the prostate gland were not recognizable clinically.

The frequent finding of a microscopically small carcinoma in the prostate gland in aged men dying of a variety of causes is not of clinical significance, and the evidence would suggest that while the pathologic incidence of prostatic cancer lies in the neighborhood of 17 to 21 per cent in men over fifty years of age, the clinical incidence of cancer of the prostate gland is nearer ten per cent.

It is of interest that in these studies cancer of the prostate gland was not found more frequently in patients seeking relief from obstructive symptoms than in patients of the same age group dying from unrelated causes. This observation would suggest that benign prostatic enlargement, that is, fibro-adenomatous hyperplasia, is not a predisposing factor to cancer of the prostate gland, but rather that the two diseases arise independently and may occur separately or in combination.

There has been much discussion in recent years as to what portion of the prostate gland is the most frequent site of origin of cancer. This is important from a diagnostic standpoint, since a tumor arising in the posterior lobe should be diagnosed earlier on rectal palpation than one having its point of origin farther away from the examining finger. In his studies, Moore found that three out of four of the cancers of the gland arose in the posterior lobe, while Kahler observed that half of the malignant growths had their origin in the posterior lobe and the other half in one or the other of the lateral lobes.

SYMPTOMS

The first symptom by which cancer of the prostate gland announces its presence is usually that of obstruction to the outlet of the bladder. The only distinctive feature between benign and malignant obstruction is that the history of onset is likely to be more rapid in malignancy. In a patient who gives a history of slowly developing ob-

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struction over a period of years, the process is likely to be benign, while a rapidly developing obstruction over a period of months makes one suspicious of malignancy. Hematuria associated with prostatic enlargement is not a differential symptom; it is just as likely to occur with a benign as with a malignant growth. The second symptom in order of frequency is that of back pain. Pain in the back is, however, a symptom of metastases. A rectal examination in a man over fifty years of age who complains of pain in the back will not infrequently reveal a malignancy originating in the prostate gland. The mode by which these metastases occur has been demonstrated by Warren, Harris and Graves to be along the perineural lymphatics. The perineural involvement itself cannot, of course, be demonstrated on x-ray films, but as the disease progresses it spreads from those lymphatics to the adjacent bones of the lower spine. Kahler found that local metastases to the perineural lymphatics about the gland had already occurred in 91 per cent of all cancers of the prostate gland studied by him.

DIAGNOSIS

The diagnosis of cancer of the prostate gland depends primarily on rectal palpation of the gland. The characteristic features of malignancy are those of a hard and fixed gland. The examining finger can raise and move a benign gland but not a malignant one. The presence of a hard nodule, or nodules, in the posterior lobe is also indicative of cancer, but is not a constant finding. At times the rectal palpation is more important in diagnosis than is biopsy. If one is certain on rectal examination that the gland is malignant, and the pathologist fails to find malignancy in the tissue removed at resection, one still adheres to his original diagnosis of cancer. The pathologist is able to report only on the tissue which has been removed, and occasionally the tissue which obstructs the bladder outlet will be benign at the same time that a malignancy exists at the periphery of the gland. Regarding rectal examination of the prostate gland, it may be said that if one suspects a cancer, it is probably present, and if a definite diagnosis of cancer is made, it has already metastasized. The early diagnosis of cancer of the prostate gland cannot often be made by the urologist, for by the time the patient comes for relief from urinary symptoms, the malignancy is usually well advanced. Barringer⁶ has stated that in 98 per cent of his patients, when seen, the carcinoma had grown beyond the prostate gland. The earlier diagnosis of cancer of the prostate gland must then depend on a careful rectal palpation of the gland as a part of all general physical examinations of men over fifty years of age.

TREATMENT

The treatment of cancer of the prostate gland must of necessity be directed toward the relief of symptoms and the prolongation of a comfortable life rather than toward the total eradication of the disease, except in a small percentage of cases. In many types of malignancy we are today looking toward radium and x-ray as curative agents. Cancer of the prostate gland, however, is radioresistant and up to the present time, while x-ray has given symptomatic relief and radium has stayed the rate of growth in certain cases, neither has been of value in actually curing the disease. Nor have the operations designed for the relief of obstruction, such as transurethral resection, suprapubic enucleation or simple perineal prostatectomy, been of aid in curing prostatic cancer except perhaps accidentally. Recently, while performing a transurethral resection for a supposedly benign obstruction, I encountered a small granular nodule in the left lateral lobe which microscopically proved to be malignant. Considerable benign tissue was removed from all sides of this lesion, and it is possible that an early malignancy was eradicated in the course of the operation, but time alone can tell. The only operation designed to cure cancer of the prostate gland is total perineal prostatectomy, and this is the only operation which holds out any prospect of effecting more cures in the future.

The results of total perineal prostatectomy for cancer have recently been reviewed by Colston,⁷ who reports nineteen patients who have been cured in this way. He uses a five-year survival as the criterion for cure and refers to one patient who is well twenty-five years after the operation. Any survival of less than five years certainly could not be considered a cure, for patients known to harbor a carcinoma in this gland often survive for several years in good health. I recently did a resection for relief of obstruction in a patient for whom a microscopic diagnosis of cancer had been made four years and two months previously. If a radical operation had been performed at that time, one might now be misled into thinking that a cure had been effected.

Radical operation for cancer is applicable in very few cases. Colston reports nineteen cures at the Brady Urological Institute in Baltimore, where many more than one thousand cancers of the prostate gland have been cared for. The available statistics suggest that the radical operation can be undertaken on only about four patients out of a hundred and that there is a prospect of effecting a cure in only about half of these operations. The fact remains, however, that a few patients have been cured by this operation, and if such opera-

tions as total gastrectomy and total pneumonectomy are to be undertaken for cancer in those regions, it follows that total prostatectomy can justifiably be undertaken for cancer of the prostate gland in the occasional case.

The practical problem, however, is how to treat the remainder of the cases, since they constitute the overwhelming majority of cancers of the prostate gland. Experience has shown that the interests of those patients are best served by conservative treatment, and the methods now available for the alleviation of their symptoms are encouraging and frequently satisfactory.

The most distressing complication of prostatic cancer is obstruction to the urinary outflow. Most patients with cancer of the prostate gland seek medical aid because of obstructive symptoms and, as Kickham⁸ states, "the results of postmortem examinations have definitely demonstrated that impairment of kidney function is the most common cause of death in carcinomas of the prostate gland." The urgent problem in relieving those patients of their distress and in prolonging their life is to remove the obstruction at the bladder neck. This is best accomplished by transurethral resection because it is the most conservative operation that can be effectively employed. At operation the landmarks about the bladder neck are frequently found to be obscured by malignant invasion which requires the surgeon to proceed with caution. However, the malignant tissue bleeds less readily than adenomatous tissue, and owing to the rigidity of the gland the passage through the prostatic urethra remains widely open. If the patient makes a long survival, the cancer may again obstruct the bladder neck at a later date, but having experienced grateful relief from his obstruction at the previous operation, the patient willingly accepts a subsequent resection. Most frequently, however, the patient terminates his remaining life without requiring further operative procedures. The value of conservative surgery is well illustrated by a patient with a Grade IV malignancy of the prostate gland who continued in excellent health for two years and three months after his resection and died of a cerebral hemorrhage without recurrent evidence of obstruction or of malignancy.

The second complication of prostatic cancer is that of the pain caused by perineural and osseous metastases in the pelvis and lower spine. X-ray therapy has been very helpful in alleviating metastatic pain and presumably in prolonging life. The benefits of the combination of surgical and x-ray therapy are well illustrated by the case of a man who came in complaining of such severe dysuria and frequency that he could get no rest. In addition

he complained of backache. A rectal examination revealed a cancer of the prostate gland, and metastases to the sacral spine were demonstrable in the x-ray films. A transurethral resection was performed and followed by x-ray therapy. During the eleven and one-half subsequent months of his survival, he was continuously free from both urinary symptoms and backache.

SUMMARY

1. Cancer of the prostate gland metastasizes early, often before it becomes diagnosable.
2. Urinary obstruction is a late symptom of cancer of the prostate gland, and by the time obstruction occurs the cancer has almost always extended beyond the gland.
3. The earlier diagnosis of cancer of the prostate gland cannot be made by the urologist, who sees the patient only when he develops urinary symptoms. The earlier diagnosis can only be made by attentive rectal palpation of the gland as a part of all physical examinations on men over fifty years of age.
4. Radical operation offers a prospect of cure in the small percentage of cancers of the prostate gland which can be diagnosed before they cause local symptoms and before they begin to extend through the perineural lymphatics.
5. X-ray therapy alleviates the pain caused by perineural metastases, and transurethral resection offers grateful relief from the distress caused by the obstruction to the outlet of the bladder.

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CARCINOMA OF THE BREAST*

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Carcinoma of the breast causes 14,000 to 16,000 deaths each year in the United States. The interest in this lesion by both the medical profession and the laity probably exceeds all other tumors.

The question is often asked: How can one diagnose a carcinoma of the breast? Patients with a breast tumor may be divided into two classes for diagnostic purposes. The first group includes all patients with only a palpable mass and no other findings suggestive of malignancy. The second group includes those who have one or more of the classical features which we recognize as meaning carcinoma. These include the story of a painless tumor mass which is gradually increasing in size: the nipple has often changed its position, becoming inverted or displaced; a dimpling of the overlying skin, or perhaps the so-called "pig-skin" appearance in the epidermis is noted; and the mass is fixed to the skin or the underlying muscles. Occasionally ulceration has already occurred. At times markedly enlarged lymph nodes are palpable within the axillary space. In some patients there are symptoms or findings suggestive of distant metastases, including headaches, rheumatism, shortness of breath, persistent cough and hemoptysis. If one is able accurately to diagnose the tumor clinically a late stage of the disease is present. It is of much greater importance to suspect an early clinically questionable cancer. Such tumor masses, if proved subsequently to be malignant, are less likely to have local or distant metastases. Fifteen different diseases of the breast are known at times to give rise to diagnostic signs considered pathognomonic of carcinoma of the breast. Three of this group are common; chronic cystic mastitis, adenofibromas and intraductal papillomas.

Chronic cystic mastitis includes many diffuse conditions of the breast, which cannot be called neoplasms, nor do they belong to the inflammatory class. It appears in any age from puberty to beyond the menopause, and is characterized by pain, nodularity in the breast, and occasionally a discharge from the nipple. Adenofibromas are relatively common, producing benign, painless, well-circumscribed tumors. The third confusing lesions, intraductal papillomas, are frequently multiple, producing a bloody or serous discharge

from the nipple, with or without a palpable tumor in the breast.

The incidence of errors in clinical diagnosis of early breast cancer is not appreciated. In patients past forty years of age the correct diagnosis of a breast tumor from clinical evidence alone is 70 per cent accurate. We must admit to ourselves and our patients, when dealing with a small lump in the breast, that a diagnosis can be made only after the tumor has been removed and histologic studies have been made. The tumor should be totally excised under general anesthesia since there is danger of spreading the cancer, if present, by the needle trauma of infiltration. It is to be remembered that the gross pathology is not always a reliable guide. Halsted mistook ten per cent of benign lesions for carcinoma in gross pathology. For classification of the tumor, as well as tumor cell morphology, permanent properly prepared histologic sections are required.

The prognosis is dependent upon the extent of metastatic spread, the degree of malignancy of the cells which form the tumor, the age of the patient, pregnancy and lactation. At the University Hospital we have never known a patient who developed a cancer of the breast during pregnancy or lactation, to be alive five years after the diagnosis. We believe that the pregnancy should not be interrupted. If the lesion is operable, radical mastectomy before the sixth month of pregnancy is indicated. If the tumor is of the inflammatory type, or has associated axillary lymph gland involvement, preoperative irradiation therapy is given. When a malignancy is diagnosed late in the pregnancy, irradiation therapy will control the lesion until after delivery. If distant metastases are diagnosed during pregnancy no treatment should be given.

Metastasis may occur through the blood stream or through the lymphatics. The axillary lymph nodes are most frequently involved since the major drainage from the lymph network of the breast occurs by this route. The internal mammary lymph nodes are second in frequency of lymph node involvement. Occasionally the opposite axillary lymph nodes, or supraclavicular lymph nodes, or lymph nodes along the falciform ligament are apparently involved first in the disease.

To obtain a fair evaluation of the treatment of breast cancer it must be emphasized that in a large group of unselected cancer patients with no treatment whatever 28 per cent will live three years, and 17 per cent will survive five years.

In recent years there has been considerable

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controversy concerning the proper therapy for these lesions. The outstanding question has been in regard to the proper place for irradiation therapy, either replacing surgery or as an adjunct to it. Some physicians believe that surgery is rapidly losing favor as the essential treatment of this disease.

Our interest in irradiation therapy dates from July, 1932, when certain selected groups of patients were treated by roentgen rays with or without surgery. The technic has varied somewhat, although a maximum amount of treatment is always given to a described region. The benefit, both grossly and microscopically, of intensive roentgen therapy has been noted. Surgery, when performed, has been well standardized. Regardless of added roentgen therapy, either preoperatively or postoperatively, radical mastectomy has remained a radical and complete operation following the principles of technic so excellently described by Halsted. The operation has been performed when no metastasis beyond the axilla was obvious and no constitutional conditions contraindicating the procedure existed. The mortality rate for radical mastectomy is less than two per cent. If axillary lymph nodes are not involved, radical mastectomy has resulted in 68 per cent five-year cures.

During the past nine years patients with axillary metastases obvious at the time of admission, have usually received an intensive course of preoperative irradiation therapy. A somewhat larger group has received intensive postoperative irradiation when axillary metastases have been found at the time of the operation. The three-year survivals for these two groups of patients having axillary metastases, and receiving either pre- or postoperative irradiation therapy were essentially the same. Thirty-eight per cent of the patients receiving pre-operative treatment have a three-year survival, and 37 per cent of the patients receiving postoperative irradiation therapy have survived three years. A similar group of patients with axillary metastases, proved by histologic examination, but receiving no irradiation therapy either pre- or postoperatively, have a 34 per cent three-year survival. In patients with axillary metastases, intensive irradiation therapy increases the three-year survivals between three and four per cent. Patients with axillary metastases who have not received irradiation therapy have a 22 per cent five-year cure. This latter figure is five per cent higher than in patients with axillary node involvement who receive no treatment. Preoperative irradiation therapy is contraindicated in the patient past sixty-five years

of age with an operable lesion. Irradiation therapy is added to the radical operation when we wish to err on the side of overuse of all therapeutic measures.

There are many indications for irradiation treatment. The primary lesion is often satisfactorily controlled when distant metastases are present. Pain from metastases to bone is frequently relieved. Pathologic fractures will usually heal following proper immobilization and irradiation. Local recurrence of cancer can be satisfactorily controlled. This is especially true of recurrences in the skin. Irradiation therapy given preoperatively is indicated in the inflammatory type of carcinoma. Irradiation castration is given to patients less than forty years of age. Frequently in patients of this age group castration has produced a profound beneficial influence on the primary lesion, as well as on local and distant metastases. If the malignancy is operable the irradiation castration is carried out postoperatively.

The prophylactic treatment of cancer of the breast necessitates a simple but complete mastectomy. Such mutilating operative procedures should only be carried out in selected cases. Chronic cystic mastitis is not a precursor of cancer; however, it is a condition frequently accompanying carcinoma of the breast. Patients past forty years of age with increased breast activity, discomfort in a breast and tumor formation, are candidates for simple mastectomy. Multiple intraductal papillomas in individuals past thirty years of age should have a simple mastectomy. Usually these patients have multiple intraductal papillomas, and often a paraductal proliferation of epithelium which histologically strongly suggests a precancerous lesion.

CONCLUSIONS

The diagnosis of carcinoma of the breast is made from the gross and microscopic pathology of the tumor. This necessitates an immediate excision of all questionable breast tumors. One is not justified in delaying the exploration of a breast tumor.

The prognosis for "five-year cures" is good if the treatment is started before axillary or other distant metastases have occurred. Irradiation therapy may prolong the life of these patients, but does not increase the number of "five-year cures." Surgery, in the form of radical mastectomy, is still the principal agent in treatment.

An occasional simple mastectomy is good prophylactic treatment for carcinoma of the breast.

GENERAL SUMMARY OF SYMPOSIUM ON CANCER*

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Dr. Olson and I were just discussing a talk we heard a few years ago on malignant disease. The speaker, a rough-spoken sort of man, said, "Cancer don't cure easy." I think that sums up this question of malignancy pretty well. In medical school I was introduced to the subject of pathology with the statement that, as soon as you are born, you begin to die. This is a rather grim statement but it is pretty true. After all, doctors exist principally to delay death and to make living as comfortable as possible.

I was very much interested in all of the presentations. I cannot cover each individual one, but I think certain things are outstanding in each presentation. Each speaker demonstrated that in the last few years, progress has been made in each field. For instance, Dr. Randall showed that the five-year survival rate in cases of carcinoma of the cervix in the last few years has improved something like eleven to twelve per cent.

The question of postoperative roentgen treatment in each one of these fields is, I think, an important one. Dr. Dulin brought it out in connection with roentgen treatment after radical mastectomy, and it was also mentioned by Dr. Randall in connection with the operations on the ovary or on the uterus and the cervix. I believe, as I know those who have spoken believe, that roentgen treatment is a step in the right direction, as far as the treatment of a majority of malignant lesions is concerned, but that it should be combined with surgery, with few exceptions. One of those exceptions was mentioned; the squamous cell carcinoma of the cervix is best treated by irradiation and not by operation.

The factor of heredity as it is related to malignancy should be stressed in taking the history in any case of malignant or suspected malignant condition, such as tumors in the breast or bleeding from the uterus at the ages in which malignancy may be suspected. The tendency to radical treatment should be influenced somewhat by the history of malignancy in the family.

As to the question of castration, I believe, as Dr. Dulin does, that in the cases of malignant lesions of the breast, there is much to support the idea that castration by irradiation is of benefit.

Dr. Olson's paper on carcinoma of the prostate gland was most interesting. We must remember

that probably the lowest mortality rate possible when radical operative procedures were used for carcinoma of the prostate gland, by either the perineal route or the abdominal route, was seldom less than eight per cent. Usually the mortality figures in cases in which radical operations of that nature were employed were closer to 20 per cent. Transurethral resection, on the other hand, has a mortality rate of less than one per cent; this is particularly true of the group of patients who are less than seventy years of age.

I appreciate the privilege of meeting with you, and I would like to close with one more remark in connection with malignant disease, which is in some sense encouraging. Any patient who has survived five years after operation for removal of a malignant lesion, according to vital statistics for the equivalent ages, has a little better survival rate than the average person of equivalent age. In other words, by operation and removal of a malignant lesion and survival for five years, something has been removed from that individual patient which otherwise would bring death earlier.

Again I would like to say that I appreciate very much the privilege of having been asked to meet with you here in Davenport.

AID TO THE BLIND PROGRAM*

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The Aid to the Blind law was originally passed in 1937 and revised by the legislature of 1941. This law was written in conformity with the provisions of the federal law known as the Social Security Act of 1935.

The federal government participates in the Aid to the Blind program by matching state and county funds for the assistance allowed. The program in Iowa is divided into assistance which is the monthly sum granted in cases of need, and the remedial service which is the treatment given for the restoration of vision or the prevention of blindness. The assistance allowance is matched on a fifty-fifty basis by state and federal funds, the state assuming one-fourth, the county one-fourth and the federal government one-half of the total. The remedial program is a service financed entirely by state funds, the state assuming three-fourths of the cost and the county the remaining fourth. Since January 1, 1940, the maximum assistance which can be given in any one case is \$40.00 per month. On this date (May, 1941) the average assistance for an individual, in round figures, is about \$24.00 per month.

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In each county there is a county board of social welfare and sufficient workers to take the applications and investigate the need of those asking assistance. Applications are made on the proper forms and eye examinations by qualified ophthalmologists are required. The findings in eye examinations are reported on Form PA-701. The county board of social welfare sends in the investigation and the eye examination report in each case with its recommendations for the approval of the State Board of Social Welfare and the consultant ophthalmologist. From these findings, approvals and rejections are made by the State Board of Social Welfare and the decision returned to the county in which the application originated.

The ophthalmologist's report is an important factor in the Aid to the Blind program in determining the eligibility of an applicant insofar as vision is concerned. A good examination report is a determining factor in whether or not an applicant receives assistance. In selecting ophthalmologists in the state, the State Board of Social Welfare accepted the recommendations of the Iowa State Medical Society. It was agreed that all doctors who limited their practice to eye, ear, nose and throat work and were members of the Iowa State Medical Society could qualify as examiners for this service. A few exceptions were made in cases where there was no available ophthalmologist within a reasonable distance. In these cases a general practitioner who was qualified to make the eye examination was selected.

The osteopaths presented a complaint that they were not included in this program and that they had a number of ophthalmologists in the state who were recognized by the state law. They requested that osteopaths limiting their practice to ophthalmologic work should be qualified as examiners under our rules and regulations. At the present time, we have three osteopathic ophthalmologists who have been qualified.

As stated before, the remedial program is purely a state service financed by state funds for the restoration of sight or the prevention of blindness when treatment is recommended by the local ophthalmologist and approved by the state consultant ophthalmologist. The fee paid to the ophthalmologist for services rendered is about 50 per cent of the regular charge. In all cases the applicant is permitted to select the ophthalmologist of his choice to administer treatment. Remedial treatment is given to assistance cases and also to cases asking for remedial care only, providing all other requirements of the law have been met. The last legislature amended the law to include old age assistance recipients and those under eighteen

years of age whose vision could be restored or blindness prevented by treatment. These two classes were not accepted under the original law. The new amendment will not be in effect until July 4, 1941.

The state appreciates the cooperation of the ophthalmologists. We suggest that patients under your observation, where you feel that blindness can be prevented or sight restored and there is no other source of assistance available, make application for remedial care at the department of social welfare in the county of residence. We assure you that careful consideration will be given these cases.

The remedial cases since the inception of the program to January 1, 1941, are:

Number approved	173
Remedial only	47
Results successful	19 or 14%
Vision restored	51 or 38%
Results unsuccessful	13 or 10%
Refused treatment	40 or 30%
Others (deaths, removed to institutions)	10 or 8%

As has been previously stated, the patient may select the ophthalmologist of his choice. We find that about two-thirds of the cases have either selected, or have been advised by the examining ophthalmologist to go to the University Hospital in Iowa City for treatment. The treatment of all patients has been satisfactory and further reports will be given concerning the success and expense of the remedial service.

Our records reveal that from the inception of the Aid to the Blind program to January 1, 1941, cases which have been approved for blind assistance total 1,508. We have 2,971 applications for assistance on file. These records have been reviewed and coded, using the etiologic and topographic classification of the causes of blindness adopted by the American Academy of Ophthalmology and Otolaryngology and the National Society for the Prevention of Blindness. This is the best method we have at this time to determine the causes of blindness. It is incomplete in some cases because of incomplete reports made by the examining ophthalmologist.

In the limited time at my disposal, I have only hit the high spots of this program and for a review of our findings, I wish to present slides. The general headings of etiology are:

1. Infectious diseases.
2. Traumatic and chemical injuries.
3. Toxic poisoning.
4. Neoplasms.
5. General diseases.
6. Prenatal and hereditary origin.
7. Etiology undetermined and unspecified.

Working with this classification, the causes of blindness in the 1,508 patients treated under this program have been recorded as follows:

Infectious diseases		256
Measles	12	
Meningitis	11	
Ophthalmia neonatorum	31	
Gonorrhreal	9	
Not specified	22	
Scarlet fever	8	
Syphilis	78	
Prenatal	11	
Acquired	9	
Not specified	58	
Trachoma	95	
Other diseases	21	
Specified	14	
Not specified	7	
Trauma (burns and poisonings)		207
Non-occupational activities	115	
Birth processes	8	
Play or sport	47	
Household activities	6	
Traffic and transportation	9	
Other activities specified	42	
Activities not specified	3	
Occupational activities	69	
Activities not specified	19	
Poisonings	4	
Non-occupational activities	3	
Occupational activities	1	
Neoplasms	13	
General diseases	102	
Anemia	2	
Diabetes	37	
Nephritis and kidney disorders	3	
Vascular diseases	20	
Diseases of the central nervous system	11	
Diseases of pregnancy	3	
Diseases of nutrition	1	
Others specified	21	
Others not specified	4	
Prenatal, congenital, hereditary	226	
Hereditary origin established	119	
Hereditary origin presumed	13	
Prenatal origin not specified	94	
Etiology undetermined or not specified	704	
Unknown to science	354	
Undetermined by physician	211	
Not specified	139	
TOTAL		1,508

Topographical types of importance encountered in this series of patients include the following:

Glaucoma	159
Myopia	49
Albinism	8
Phthisis bulbi	31
Cornea	
Interstitial	13
Ulcerative	76
Not specified	47
Iridocyclitis and uveitis.	20
Sympathetic ophthalmitis	37
Play or sport	14
Cataract	278
Senile or unknown to science	136
Prenatal or congenital	30
Not specified	37
Not determined by physician	15
Occupational activities	10
Choroid	35
Undetermined by physician	17
Chorioretinitis	70
Unknown and not specified	39
Retina	87
Detached	16
Retinitis pigmentosa	53
Optic Nerve	250
Lues	38
Meningitis	9
Prenatal	15
Unknown or not determined	110
Optic Neuritis	10
Vitreous (primary)	12
Amblyopia (bilateral)	18
Lesions not specified	36
Heredity or congenital	
Myopia	49
Albinism	8
Microphthalmos	10
Cataract	165
Retinitis pigmentosa	53
Amblyopia (bilateral)	11

Discussion

Dr. George C. Albright, Iowa City: A statistical type of paper, such as Dr. McCoy has just presented, unfortunately permits very little difference of opinion, and differences of opinion serve to make discussions interesting. Such papers, however, do have two very distinct and useful purposes.

In the first place, they stimulate us as ophthalmologists to a more careful statistical study of our own cases. They also aid us in determining, in some cases at least, the accuracy of our own diagnoses. The relative frequency of the various causes of blindness set forth in this statewide survey should be an index to the relative frequency of such cases in our own practice. It may serve, therefore, as a check upon any tendency we have to make, too frequently, a diagnosis of a rare condition as well as to challenge us not to overlook a rare condition in the mill-run diagnoses of common cases. The second purpose of such papers is to test the ability of the essayist to present statistics, which are usually dry and uninteresting, in a manner which shall prove both interesting and profitable. In this Dr. McCoy succeeded well.

Dr. McCoy's paper is timely in that it brings before us the concerted effort which is being made to render assistance to the unfortunate blind. Schools for the blind have been maintained in Iowa for years. Unfortunately only a small percentage of the blind population ever attends the school for the blind. This law carries the aid to the blind into the more important preventive stage. It also, since the revision of this law, makes possible aid for those older people who formerly were cared for by interested relatives or county homes. It should form also a valuable adjunct, by its provisions for the remedial program, to the eye clinic of the College of Medicine. As the essayist has pointed out, from the inception of the program in 1937, up to January 1, 1941, 173 cases have been approved for remedial care. That this will aid the eye service in the College of Medicine is shown by the fact that two-thirds of those granted remedial care go to the University Hospital for that treatment. They go either upon their own volition or at the suggestion of the examining ophthalmologist.

It is well to emphasize that the State Board of Social Welfare has accepted the recommendation of the Iowa State Medical Society, concerning who may examine the blind. Any physician who limits his practice to eye, ear, nose and throat work, and who is a member of the State Society, may qualify for this service. This gives all ophthalmologists who so desire an opportunity to participate in this worthy program.

Dr. Henry G. Langworthy, Dubuque: Blindness in Iowa as related to our state blind assistance program is placed before us by this paper. I know of no finer piece of social legislation than expert examination and financial aid to the needy blind. The other side of this question, namely, attention to those not yet blind but growing blind needs our consideration in order to devise some better plan of meeting

the medical cost in these cases than exists in this state at the present time. The blunt and startling truth about blindness is the fact that if any of us live long enough, to a ripe enough old age at least, we will probably become blind. There are not many exceptions to this rule.

A second point equally startling, perhaps, is the further fact that we do not as yet know or understand the real cause of the most common old age blinding diseases such as cataract, glaucoma, sclerosing forms of chronic keratitis and many optic nerve and fundus changes. Naturally the question in the state blinks as to what etiologic factor is responsible for the blindness, falls flat under such circumstances.

On the other hand since syphilis in some form, eye injuries and ophthalmia neonatorum cause approximately 40 per cent of the blindness in most blind schools, it might be said, somewhat optimistically of course, that theoretically this 40 per cent falls within the field of preventable blindness.

In my judgment the blind and growing blind people of Iowa will gain much by closer attention to four things:

1. Prevention and better treatment of syphilis in its various aspects.

2. Still greater educational campaigns looking to the safeguarding of eyes from injury of all kinds, in home, on the farm and in the shop.

3. Skillful operative attention to elderly people who are either growing blind or are already blind. In so many instances surgery has everything to offer and nothing to lose. Preventive surgery, however, must be skillful and well planned.

4. Some better and juster plan to compensate the ophthalmologist for proper care and glasses in some 25 per cent of the people growing blind, must be devised than exists at present. Only a complete general physical examination and considerable laboratory work, will throw light on many of these problems. The state agency should pay a living wage to the eye specialist who acts as the medical executive in discovering obscure causes of blindness.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

CYANIDE POISONING

F. P. McNAMARA, M.D., Dubuque

Usually the rare cases of cyanide poisoning which are encountered in practice terminate fatally before receiving medical attention. Therefore many physicians are skeptical as to the possibility of preventing death in these cases although cures have been reported during the last ten years. The prevention of death demands a quick diagnosis and the prompt application of the more or less specific antidotes which have been discovered in the last

decade. While the speed with which the cyanides cause death may prohibit the use of the antidotes in many cases, it is well to remember that in some, death is delayed for one, two or three hours and in these, cures are probable if the proper antidotes are utilized. Statistics indicate that about 400 deaths from cyanide poisoning occur annually in this country. In our series of 800 necropsies, there were two deaths.

CASE REPORTS

The first patient was a retired jeweler, sixty-four years of age, who became despondent because of poverty and ill health and swallowed a solution of potassium cyanide which he had formerly used to polish silver. The second case was that of a man twenty-four years of age who for an unknown reason took some cleaning compound containing cyanide.

In each instance the postmortem lividity was a dusky violet color and the blood remained fluid for at least five hours after death was known to have occurred. All the viscera were dusky red and the lungs were edematous. The gastric mucosa was crimson red with scattered areas of a brownish tint and showed superficial corrosions. The characteristic odor of bitter almonds permeated all the viscera but was especially pronounced in the stomach. Tests were carried out on distillates of the stomach and liver. Each gave a positive Prussian blue test which is specific for cyanides according to Gonzales, Vance and Helpern.¹ In the first case, besides moderate arteriosclerosis, there was a chronic and subacute mitral endocarditis with dilatation of the left auricle and chronic passive congestion of the viscera. In the second case, no pathology except that due to the poison was found.

GENERAL DISCUSSION

Hydrocyanic acid is one of the most powerful poisons known. When acids act upon the alkaline cyanides, there is liberated a volatile gas which is used especially in disinfecting ships and warehouses. Smaller amounts are also given off in the burning of celluloid and in the distillation of coal tar. Combined with glucosides, it occurs in the seeds of such fruits as cherry, peach, plum, apricot, apple and pear and at times, a toxic effect may result from their digestion.

Potassium and sodium cyanide are deliquescent, white salts which are especially toxic in the presence of dilute acid as hydrocyanic acid is set free. These salts are used in electroplating, polishing of silver, gilding of metals, photography and in the determination of uric acid in the blood. Other less well known poisonous compounds are ammonium, silver, zinc or mercury cyanide. Sodium nitroprusside, potassium ferrocyanide and ferri-

cyanide are less poisonous as are the cyanates and sulphocyanates because they do not decompose readily.

Hydrocyanic acid may be ingested accidentally but usually is taken with suicidal intent by persons who know its properties and have access to it, such as pharmacists, chemists or physicians. Hydrocyanic acid may be absorbed through the lungs by workmen fumigating ships or warehouses. The cyanides may be taken accidentally but in most cases are ingested for suicidal purposes by jewelers, photographers, electroplaters or others familiar with their poisonous properties.

When the poison is ingested or inhaled in lethal doses, the patient collapses, becomes unconscious and may die with convulsions within a few seconds or minutes. If smaller doses are taken, the victim collapses, has a cold sweat, gasping respirations and finally becomes comatose. When cyanides are taken, the onset is slower because it takes a variable length of time for the hydrocyanic acid to be released by the gastric acid. Occasionally this period is one or two hours, and the utilization of the proper antidotes during this time may prevent the death of the victim.

Until about ten years ago, poisoning by hydrocyanic acid and the cyanides always terminated fatally. For a number of years before that time, it had been known that a solution of methylene blue, U.S.P. (methylthionine chloride) protected experimental animals against lethal doses of the poison. In 1932, Geiger² first tried the drug on a human being who recovered. Two years later he and Gray³ reported six recoveries in patients so treated. Geiger recommends the intravenous administration of 50 cubic centimeters of a one per cent solution of methylene blue in water or in a physiologic normal sodium sulphate solution (1.8 grams per cent). The solutions are stable for long periods of time if kept in sealed ampoules. Three doses of 50 cubic centimeters each can be given within two hours.

In 1933, Chen, Rose and Clowes⁴ described experiments on dogs in which more beneficial effects were obtained by the inhalation of amyl nitrite than by the intravenous use of methylene blue solution. In 1934 and 1935 they⁵ and⁶ reported even greater improvement by the combined use of amyl nitrite inhalations and intravenous injections of solutions of sodium nitrite and sodium thiosulphate, injected one after the other. They recommend ten cubic centimeters of a three per cent solution of sodium nitrite and 25 grams of sodium thiosulphate in 50 cubic centimeters of distilled water. In case of a relapse, one-half of the above doses can be repeated. They stated that Viani, Cagroli and Cendan as well as Kempf and

Richey had reported cures on this regime. Other investigators⁷ and⁸ have verified the effectiveness of these antidotes and it is recommended that where there is any likelihood of cyanide poisoning, the antidotes be kept on hand ready for immediate use since the time element is of the greatest importance.

In addition to the more or less specific antidotes, certain general measures should also be carried out depending somewhat upon whether the poison has been inhaled or ingested. If inhaled and the patient is breathing, removal to fresh air may be all that is required. If respirations stop or are notably slower, artificial respirations should be started. Usually the ordinary methods are best but if a mechanical respirator is used there should be no rebreathing of expired air because it contains the poison. If the poison has been swallowed, gastric lavage with a weak solution of sodium bicarbonate should be done as quickly as possible. Artificial respiration with inhalation of oxygen and carbon dioxide, and the administration of cardiorespiratory stimulants, as well as supportive and eliminative therapy, are essential.

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STATE DEPARTMENT OF HEALTH

TENTATIVE PROGRAM Sixteenth Annual Meeting IOWA PUBLIC HEALTH ASSOCIATION

MONDAY, APRIL 13, 1942

Registration 8:30 a. m.
Savery Hotel

Physicians of Iowa are cordially invited to attend the sixteenth annual meeting of the Iowa Public Health Association, at Hotel Savery, Des Moines, Monday and Tuesday, April 13 and 14, 1942. This meeting is in the same week and immediately precedes that of the Iowa State Medical Society. It is hoped that many doctors, city physicians and local health officers will plan to attend both meetings.

The tentative program of the public health meeting is as follows:

MORNING SESSION

Ballroom

Presiding—Harry H. Ennis, M.D.

9:45 Introduction

10:00 "The Ash Grove Typhoid Fever Outbreak"—Frank J. Condon, M.D.

Discussion—I. H. Borts, M.D.

"Public Health Education Through the Use of Exhibits"—Kenneth MacDonald, Ph.D.

"Milk-Borne Undulant Fever Outbreak"—D. M. Harris, M.D.

Discussion—Carl F. Jordan, M.D.

"Meeting Emergencies and Planning the Future of Public Health"—John L. Rice, M.D.

12:15 Special Luncheon—Sponsored by the State Organization of Public Health Nursing—Ada Hershey, R.N., presiding

"What Should We Do About the Shortage of Nurses?"—Lily Hagerman, R.N.

AFTERNOON SESSION

Presiding—Dr. John L. Rice

2:00 Wartime Protection of Civilian Health

1. Communicable Diseases—J. H. Sunderbruch, M.D.

2. Sanitation—R. C. Hanlon, M.S.
3. Nutrition—J. D. Boyd, M.D.
4. Professional Nursing Service—Bertha Harvey, R.N.
5. The Iowa Industrial and Defense Commission—Thomas A. Burcham, M.D.
6. The American Red Cross—Ann Magnusen, R.N.
7. The Bureau of Labor Committee for Conservation of Man-power in Defense Industries—Chester S. Johnson
8. The State Department of Public Instruction—Jessie M. Parker
9. The Iowa Association of Social Welfare—John V. McCarthy

EVENING

Presiding—Harry H. Ennis, M.D.

6:30 Annual Dinner

Speaker—William A. O'Brien, M.D. (subject to be announced)

MORNING SESSION

Tuesday, April 14, 1942

Ballroom

Presiding—Grace Haven, R.N.

9:00 "Sputum Examinations in Pneumonia Control"—Arthur W. Frisch, M.D.

"Adjusting Public Health Nursing Services to Meet Present Needs"—Lily Hagerman, R.N.

"Recent Developments in Industrial Hygiene"—J. J. Bloomfield, Sanitary Engineer

11:30 Business Meeting—Harry H. Ennis, M.D., presiding

12:30 Luncheon—Walter L. Bierring, M.D., presiding
"Public Health in Brazil"—Jose Carvalho, D.V.M.

AFTERNOON SESSION

2:00 Conference on Venereal Disease Control
Presiding—R. M. Sorensen, M.D.
(Speakers to be announced)

SPEAKERS WHO'S WHO

- Bierring, Walter L., M.D., Commissioner, State Department of Health, Des Moines, Iowa
- Bloomfield, J. J., Sanitary Engineer, Division of Industrial Hygiene, United States Public Health Service, Washington, D. C.
- Borts, I. H., M.D., Associate Director, State Hygienic Laboratory, Iowa City, Iowa
- Boyd, J. D., M.D., Associate Professor of Pediatrics, State University of Iowa, Iowa City, Iowa
- Brayton, Arthur H., Secretary, Convention Bureau, Chamber of Commerce, Des Moines, Iowa
- Burcham, Thomas A., M.D., Chief, Emergency Medical Service for Civilian Defense, Des Moines, Iowa
- Carvalho, Jose Candido M., D.V.M., Department of Zoology and Entomology, Iowa State College, Ames, Iowa
- Condon, Frank J., M.D., Director, Health District No. 10, State Department of Health, Centerville, Iowa
- Ennis, Harry H., M.D., Director, Health District No. 1, State Department of Health, Decorah; President, Iowa Public Health Association
- Frisch, Arthur W., M.D., Department of Bacteriology and Clinical Diagnosis, Wayne University, Detroit, Michigan
- Hagerman, Lily, R.N., Associate Public Health Nursing Consultant, United States Public Health Service, Kansas City, Missouri
- Hanlon, R. C., M.S., Public Health Engineer, Health District No. 6, State Department of Health, Des Moines, Iowa; Member, Executive Committee, Iowa Public Health Association
- Harris, D. M., M.D., Director, Health District No. 3, State Department of Health, LeMars, Iowa
- Harvey, Bertha, R.N., Director, Visiting Nurses Association, Davenport, Iowa
- Haven, Grace, R.N., Supervisor, Visiting Nurses Association, Waterloo, Iowa; Vice President, Iowa Public Health Association
- Hershey, Ada, R.N., Supervisor, Visiting Nurses Association, Des Moines, Iowa
- Johnson, Chester S., Personnel Manager, The Quaker Oats Company, Cedar Rapids, Iowa; Chairman, Committee on Protection of Man-power in Industry, United States Bureau of Labor.
- Jordan, Carl F., M.D., Director, Division of Preventable Diseases, State Department of Health, Des Moines; Secretary-Treasurer, Iowa Public Health Association
- MacDonald, Kenneth, Ph.D., Department of Hygiene and Preventive Medicine, University of Iowa, Iowa City, Iowa
- Magnussen, Ann, R.N., Nursing Consultant, American Red Cross, St. Louis, Missouri
- McCarthy, John V., Chairman, Committee on Defense Health and Welfare, Iowa Association for Social Welfare, Des Moines, Iowa
- O'Brien, William A., M.D., Director, Department of Postgraduate Education, The Medical School, University of Minnesota, Minneapolis, Minnesota
- Parker, Jessie M., Superintendent, State Department of Public Instruction, Des Moines, Iowa
- Rice, John L., M.D., Commissioner of Health, New York City; President, American Public Health Association
- Sorensen, R.M., M.D., Director, Division of Venereal Disease Control, State Department of Health, Des Moines, Iowa; President-elect, Iowa Public Health Association
- Sunderbruch, J. H., M.D., City Health Officer, Davenport, Iowa
-

NOTES ON ENCEPHALITIS

Since 1933 Iowa and other midwestern states have been invaded by two newly recognized forms of encephalitis, one caused by the St. Louis virus, the other by the western strain of equine virus. Studies conducted within the past two years by W. McDowell Hammon and associates, of the George Williams Hooper Foundation, University of California, show that the two above mentioned types of encephalitis are endemic in California.

Virus Antibodies in Birds and Mammals

As part of a survey carried out in the Yakima Valley of California, Hammon and his co-workers performed neutralization tests on blood serum specimens of 1,000 birds and animals. Approximately 50 per cent of serum specimens from domestic fowl were found to contain immune bodies against both the St. Louis virus and the western strain of equine virus. Serum specimens to the extent of 35 per cent, from domestic animals (horses and goats), showed antibodies against the two viruses. Among the serum specimens from wild birds, 22 per cent showed immune bodies against the St. Louis virus and 17 per cent against the western equine virus. Serum of eight per cent of the wild mammals included in the survey showed evidence of immunity against the two kinds of virus. These findings reveal that viruses responsible for western equine encephalitis (or encephalomyelitis) and St. Louis encephalitis are widely distributed in nature, particularly in domestic fowl and domestic animals.

Mosquitoes Spread Virus

It is probable that several different species of mosquitoes serve as vectors for the spread of encephalitis. Hammon has reported the finding of encephalitis virus in mosquitoes (notably *Culex tarsalis*) which were caught alive and tested. The season of prevalence of human encephalitis corresponds with that of *Culex tarsalis*. It has been observed also that when *Culex tarsalis* stops feeding the epidemic prevalence of encephalitis ceases. This species of culicine mosquito lives through the winter as an adult and may harbor virus throughout the year.

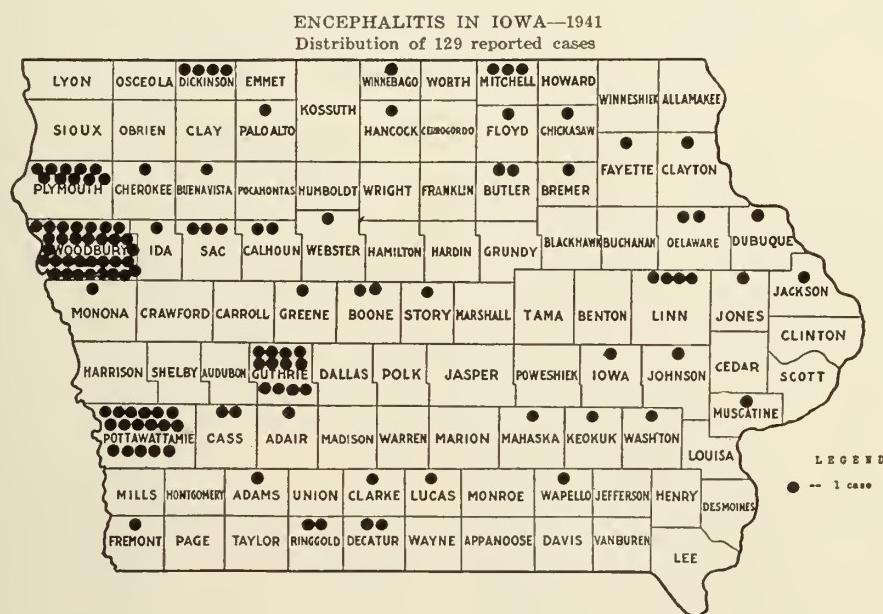
Mosquito collections made in Iowa in recent years by John A. Rowe, research assistant, De-

partment of Zoology and Entomology, Iowa State College, Ames, show that *Culex tarsalis* is found in larger numbers in Iowa than any other species of the culicine family.

An informative article by Hammon, entitled "Suggestions for the Possible Control of the American Summer Encephalitides," will be found in the January 3, 1942, issue of the *Journal of the American Medical Association*.

Encephalitis in Iowa in 1941

During 1941 reported cases of encephalitis in this state totaled 129. Distribution of cases according to county is indicated on the accompanying map.

**PREVALENCE OF DISEASE**

Disease	Feb. '42	Jan. '42	Feb. '41	Most Cases Reported From
Diphtheria	14	17	33	Scott, Cerro Gordo, Palo Alto, Polk, Black Hawk, Jasper, Marion
Scarlet Fever	230	168	234	For the State
Typhoid Fever	1	4	1	Sac
Smallpox	5	2	15	Calhoun, Harrison, Mills, Pocahontas
Measles	694	426	645	Webster, Floyd, Humboldt, Boone, Carroll, Hancock, Bremer, Black Hawk, Kossuth
Whooping Cough	84	85	133	Boone
Brucellosis	19	14	21	For the State
Chickenpox	402	508	481	Dubuque
German Measles	14	1	5	For the State
Influenza	28	7	1,208	Cedar, Clarke, Floyd, Mitchell, Decatur, Montgomery
Mumps	581	510	708	Dubuque, Linn, Mahaska, Jefferson
Pneumonia	209	227	301	Appanoose, Clinton
Poliomyelitis	0	2	3	For the State
Tuberculosis	53	18	4	For the State
Tularemia	2	2	3	Chickasaw, Iowa
Gonorrhea	141	105	115	For the State
Syphilis	228	135	184	For the State

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CANCER—A CHALLENGE

The Iowa cancer morbidity and mortality rates have doubled in the last twenty-five years. The number of deaths has risen almost without a break and last year Iowa had more cancer deaths (3,532) than ever before. One death in seven is now due to cancer. Accepting the ratio of one to three living cancer patients, annually there are 10,596 cases of cancer in Iowa. Health authorities forecast that the number of people over forty-five years of age living in Iowa will double in the next forty years. This will inevitably lead to a greater increase in cancer deaths unless the disease is better controlled. Truly cancer is a challenge to every Iowan but especially to the membership of the Iowa State Medical Society.

With the knowledge we now possess, many forms of cancer can be cured if detected while localized and completely eradicated by surgery, irradiation or a combination of the two. Early treatment is essential and no half-way measures will be successful; the cancer must be completely destroyed as soon as a diagnosis is made. To attain this objective, patients must be taught to consult their doctor when they have signs or symptoms which, however trivial they may seem, actually indicate cancer. The doctor for his part is professionally bound to put forth every effort to make an accurate diagnosis at the patient's first visit and must see that correct and adequate treatment is administered. Procrastination by the patient or the doctor and incorrect or inadequate treatment spell defeat in the fight against cancer.

Six years ago the Iowa State Medical Society encouraged the formation of the Iowa Division of the Women's Field Army, a unit of the national

organization sponsored by the American Society for the Control of Cancer. The major purposes of the organization were to conduct lay education and to obtain funds by annual enlistments with which to finance its efforts. Concomitant with the development of the lay campaign was a sustained program of professional education regarding modern methods in the diagnosis and treatment of cancer sponsored by the Cancer Committee, the Speakers Bureau and the Program Committee of the Iowa State Medical Society. The Society was aided in this work by the Iowa State Department of Health which gave its full cooperation in developing the educational program. More recently it has encouraged the formation of approved cancer clinics in some of the larger centers of population and last year created a Division of Cancer Control directed by a physician whose duty in a broad sense is to organize the available resources and agencies of Iowa to wage war against cancer.

In spite of the above work, it must be admitted that Iowa has only made a start in the control of cancer. In too few counties has the program of the Field Army been effective. Ignorance and an unreasoning dread of the disease still control the thoughts and actions of the great mass of our people. A spirit of apathy or defeatism beclouds the thoughts of too many of the medical profession. Indeed a considerable portion of the profession seems unaware of the problem of cancer. Instead of twelve or more approved cancer clinics Iowa now has only three which meet the standards of the American College of Surgeons. The remedy for these conditions is more and more education. Truly, *we must fight cancer with knowledge!*

April has been designated "Cancer Month" by a proclamation of the President of the United States. During that period, the Women's Field Army will intensify its lay educational program and will seek enlistments and contributions to obtain funds necessary to carry on its work. Two-thirds of the enlistment funds and all of the contributions are used in Iowa by the Field Army in cooperation with and under the direction of the Cancer Committee of the Iowa State Medical Society. This year, because of the demands on all due to the war, there may be an inclination to ignore the appeals for the support of various health projects. Yet these are a part of the warp and woof of America and should be supported regardless of what other sacrifices in luxuries we must make. Surely the membership of the Iowa State Medical Society will accept the challenge and support the work of the Women's Field Army which is so essential for the control of cancer.

"NIACIN" NEW TERM FOR NICOTINIC ACID

The Council on Foods and Nutrition reports in the March 7 issue of *The Journal of the American Medical Association* that it has adopted the recommendation of its committee appointed to consider the matter of renaming nicotinic acid. In the future "niacin" and "niacin amide" will be accepted as synonyms for nicotinic acid and nicotinic acid amide respectively. The necessity for this change came about primarily as the result of methods adopted in 1938 for the enrichment of flour and bread.

Because of the similarity in names between nicotinic acid and nicotine it was felt that there might be some apprehension and confusion on the part of the lay public if the term nicotinic acid was used in connection with the addition of Vitamin B products to bread stuffs. Nicotinic acid obtained its name many years ago when it was made by oxidization of nicotine, but as every scientist knows nicotinic acid is an essential vitamin in the treatment and prevention of pellagra, whereas nicotine is a poisonous alkaloid frequently used in insecticides.

This change in terminology would appear to be decidedly desirable. Certainly no opportunity for confusion in the minds of people over such an important food adjunct should be permitted, particularly in view of the fact that the problem of nutrition is now receiving so much attention in all parts of the country.

NEW TREATMENT FOR INTRACTABLE ASTHMA

The management of the patient with intractable asthma constitutes one of the perplexing problems of modern therapeutics. In spite of skin testing and the elimination of suspected allergens, the results are frequently discouraging to the patient and to the clinician.

A recent report by Shulman* contributes another method of treating persistent asthma which offers hope to a class of patients who are invalids under accepted forms of management. Impressed by the psychogenic factor in bronchial asthma and the existence of the so-called "asthmatic personality", the author sought a method of treatment which would exert its effect upon the nervous system. Impressed by the reports of Merritt and Putnam on the use of dilantin sodium in epilepsy it was decided to employ this drug in the treatment of asthma.

The drug was used in a selected series of cases. Only patients with repeated, frequent, acute attacks of asthma and constantly wheezing respirations were included. This group was composed of intractable cases which had not responded to accepted treatment. No case of purely seasonal asthma was included. The drug was administered to seven children from three to fourteen years of age over a period of five months to one year. All other methods of treatment were discontinued and all attempts to control environmental factors were eliminated. Each patient was given 0.03 of a gram (one-half grain) morning and night, and if necessary the dosage was increased 0.03 of a gram daily at intervals of one week until the patient reported no attacks of asthma or wheezing on exertion. It was found that 0.1 to 0.2 of a gram (one and one-half to three grains) daily was sufficient to prevent symptoms.

When adequate dosage was maintained six of the seven patients remained consistently free from attacks. Two patients had abortive attacks consisting of slight wheezing. In one case toxic symptoms resulted from ingestion of the drug, which cleared rapidly on withdrawal, and treatment was resumed with a smaller dose. In two cases, complicated by seasonal allergies, nasal and ocular symptoms occurred, but asthma was controlled. All the children were able to engage normally in athletic and social activities, a distinct improvement in school work was noted, and they were much brighter and less irritable.

The treatment of the patient with intractable asthma by accepted measures has been quite unsatisfactory. The use of dilantin sodium in the management of these cases offers real hope for this disabling malady. In the administration of the drug the possibility of toxic effects must be constantly considered.

THE VALUE OF A CANCER EDUCATIONAL PROGRAM

The cancer control program in the state of Massachusetts has been in operation for fifteen years. It was inaugurated with three objectives; the prevention of cancer, the early recognition and treatment of the disease, and the increase of existing knowledge. To attain these objectives diagnostic cancer clinics and treatment centers were established, research was carried on, and educational measures for the profession and for the public were employed.

Lombard and Macdonald have recently reported the results of the fifteen-year program. In the period of the program the males in Massachusetts had a much lower annual percentage increase than

*Shulman, Maurice H.: The use of dilantin sodium in bronchial asthma: a preliminary report. *New England Jour. Med.*, cxxvi: 260-264 (February 12) 1942.

the males in the United States Registration Area, whereas the females in the state had a 0.2 per cent drop, contrasted with a 0.7 per cent rise in the United States Registration Area. Since the opening of the cancer clinics, 14,000 patients with cancer have attended the clinics. Forty per cent of these are still alive. At the end of ten years after coming to the clinic survivals were listed as follows: 47.0 per cent of the patients with cancer of the skin, 23.3 per cent with cancer of the mouth, 21.6 per cent with cancer of the uterus, and 15.6 per cent with cancer of the breast.

Since the program was inaugurated the period of delay from the first recognized symptom to the time the patient presented himself to a physician was reduced from 6.5 months to 4.6 months in 1940. In 1940, 21 per cent of the cancer clinic patients went to their physician within the first month of their symptoms as compared with 15 per cent in the early years of the program. The delay between presentation at the clinic and the institution of treatment has been greatly reduced; two-thirds of the patients are treated within one week, and over 90 per cent within one month of the first visit. During the fifteen years of the program the actual number of deaths has increased by about two per cent. The clinic attendance of cancer patients has increased annually about eleven per cent. Although the attendance of new cancer cases at the clinics has increased five times as fast as the deaths, only about eight per cent of the cancer population is seen in the clinics.

The effect of the clinics is considered to be of greater significance than the statistical results. Each clinic acts as a center of cancer interest and the consciousness of cancer among the profession and the public is increasing. Between 60 and 70 postgraduate clinics are conducted each year, and over 1,300 physicians attend them. In the first year of the program 20.1 per cent of the patients were referred by physicians in contrast to 80.8 per cent in 1940. The effect of the program on the public is demonstrated by the fact that the members of the cooperative cancer control committees number over 10,000. In the early days of the program it was difficult to obtain an audience for a discussion on the subject of cancer. Today cancer meetings are arranged with little difficulty.

The evaluation of such a program cannot be made on statistics alone, for there are many intangible factors which cannot be expressed in percentages. The benefit of such a program to the public and to the physician cannot be adequately evaluated. Health departments in the various states might well emulate the example of the state of Massachusetts.

MATERNAL AND INFANT MORTALITY IN IOWA FOR 1940

Data recently released by the United States Children's Bureau include figures on the maternal and infant mortality rates for the various states for 1940. From this maze of statistical material it is possible to extract certain facts which are of interest to those concerned with maternal and child health in Iowa, and to compare them with the situation in the country as a whole.

In 1940, 8,876 women died in the United States from causes due directly to pregnancy and childbirth. This represents a rate of 37.6 deaths per 10,000 live births, which is seven per cent lower than the rate in 1939, and 43 per cent lower than a decade ago. Iowa, with 159 maternal deaths in 1940, had a rate of 35.0 per 10,000 live births, slightly lower than the national average, but higher than that of any adjoining state except Missouri, where the rate was 36.8 per 10,000 live births. During 1940, Minnesota had a rate of 22.2, bettered only by North Dakota with 17.2.

Infection, toxemia, hemorrhage, trauma and shock caused 89 per cent of the fatalities, with the first named responsible for 41 per cent (3,626 deaths). Such a division of the Iowa deaths is not possible, but presumably much the same distribution occurred. Abortion was responsible for 23 per cent of the Iowa deaths as against 19 per cent in the entire United States, and ectopic gestation accounted for eight per cent as compared with four per cent. Deaths before and after delivery amounted to 69 per cent of all maternal fatalities in Iowa as contrasted to 77 per cent in the country as a whole. This would indicate that late pregnancy and delivery complications are comparatively well managed in Iowa but that the treatment of abortions and ectopic pregnancies should and can be improved.

For the United States, the maternal mortality rate fell from 61.7, for the five years from 1931 to 1935, to 45.2 per 10,000 live births for the five years from 1936 to 1940, a decrease of 26.7 per cent. In Iowa, the corresponding rates were 52.3 and 37.8 per 10,000 live births, respectively, a drop of 27.7 per cent, slightly better than the national average.

Infant deaths in the United States in 1940 totaled 110,984, a mortality rate for the first year of life of 47.0 per 1,000 live births. Sixty-one per cent of these deaths occurred during the first month of life, and 30 per cent during the first day. The Iowa infant mortality rate was only 36.7 per 1,000 live births, which represented a slight decrease from the 1939 rate of 38.8. Corresponding 1940 rates for our neighboring states were: Illi-

nois, 35.3; Wisconsin, 37.2; Minnesota, 33.3; South Dakota, 39.2; Nebraska, 35.7; and Missouri, 46.9 per 1,000 live births. The difference in rates is probably insignificant except in the case of Missouri, where presumably the large colored population may influence infant survival. Prematurity still ranks as the leading cause of death, with birth injuries and congenital malformations next in order. These three conditions caused 49,325 of the 57,325 deaths attributed to prenatal and natal causes, a percentage of 86.0. The Iowa infant death rate dropped 14.4 per cent in the five years from 1936 to 1940, as compared with the preceding five years from 1931 to 1935. By contrast the decrease in the country as a whole was 12.3 per cent.

By and large, it appears that Iowa has followed closely the trend over the country toward lowered maternal and infant death rates. The medical profession can undoubtedly assume the major portion of the credit for this considerable saving of life, but it is obvious that with preventable diseases, infection, toxemia, shock and hemorrhage in the mothers, and prematurity and birth injuries in the infants, causing 89 and 73 per cent of the deaths, respectively, there is still some incentive to strive for better results. Assuredly, we have not yet reached the irreducible minimum, which is so frequently mentioned but which cannot be defined in concrete terms. Is it too much to hope that most of the "preventable" deaths will some day be prevented?

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS TO MEET IN DES MOINES

The fourteenth annual meeting of the Central Association of Obstetricians and Gynecologists will be held at the Hotel Fort Des Moines in Des Moines, Thursday, Friday and Saturday, October 22, 23 and 24, 1942. There is no registration fee and all physicians are cordially invited to attend and participate in the discussions. The complete program will be carried in the JOURNAL in a future issue.

The Central Association of Obstetricians and Gynecologists was organized in St. Louis in 1929 to encourage the development and the practice of the combined specialty. It has rapidly attained a position of national prominence despite the fact that membership is limited to residents of twenty-eight states in the Mississippi Valley. At present there are 346 members, each a specialist in either or both fields, or a practitioner whose work is largely limited to obstetrics or gynecology. The

idea of the First American Congress on Obstetrics and Gynecology, which was held in Cleveland in 1939, originated in a Central Association Committee appointed to study and further its development.

The Central Association meets within the geographic confines of its territory, and the 1941 meeting was held in New Orleans. Meetings are always well attended and the programs include papers of interest on timely subjects by outstanding national authorities. Des Moines has never before been host to the Central Association which has, however, met in the neighboring cities of Omaha, Minneapolis and Chicago. The Association comes to Des Moines this year on the invitation of the Iowa Obstetric and Gynecologic Society. The meeting is comparable in scope to national conventions of various other specialists, and the three-day session will offer postgraduate instruction of the highest order. We predict that a large proportion of Iowa's general practitioners will avail themselves of this opportunity to learn of recent advances in the fields of obstetrics and gynecology.

SPECIAL FEATURES of the 1942 State Meeting



GOLF TOURNAMENT AND DINNER

Tuesday Afternoon, April 14
Wakonda Club



FRACTURE COMMITTEE LUNCHEONS AND PANEL DISCUSSIONS

Thursday, April 16 — 12:15 p. m.



SCIENTIFIC MOVING PICTURES

Wednesday, Thursday and Friday



EDUCATIONAL AND WORTHWHILE SCIENTIFIC EXHIBITS



THIRTY-FOUR COMMERCIAL EXHIBITS FOR YOUR INFORMATION AND INSPECTION



Plan now to attend and make your reservations at once

SPEAKERS BUREAU ACTIVITIES

FALL POSTGRADUATE MEDICAL COURSES

It is time to start planning fall postgraduate medical education programs. Work has already begun on some of the schedules, and in order to allow sufficient time to contact speakers and make the necessary arrangements, those county societies interested in such a course should make their wishes known to the Speakers Bureau. Every effort will be made to set up each program in accordance with the needs and desires of that particular group, and tentative schedules will be submitted for approval. A majority of the groups now having postgraduate medical lectures will adjourn for the summer and then resume their meetings in September.

It is not anticipated that complete programs will be published in the JOURNAL, but each month this page will carry the postgraduate medical lectures scheduled for that particular month.

RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

April 1-3 Control of Cancer

E. G. Zimmerer, M.D.

April 8-10 Medical Defense

T. A. Burcham, M.D.

April 15-17 Diet and The Growing Child

O. D. Thatcher, M.D.

April 22-24 Appendicitis

J. R. Flynn, M.D.

April 29-May 1 Sinus Infection

B. L. Knight, M.D.

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF APRIL

Marshalltown Hotel Talcorn 6:30 p. m.	April 7	Blood Dyscrasies Malcolm M. Hargraves, M.D., Rochester
Sheldon Arlington Hotel 6:30 p. m.	April 7	The Office Treatment of Rectal Diseases Louis E. Moon, M.D., Omaha Diabetes and Its Treatment with Insulin Frank M. Conlin, M.D., Omaha
Newton Skiff Memorial Hospital 6:30 p. m.	April 14	Management of Fractures of the Upper Extremity Lewis M. Overton, M.D., Des Moines
Carroll St. Anthony Hospital 6:30 p. m.	April 23	Physical Diagnosis of Conditions in the Chest Thomas A. Peppard, M.D., Minneapolis
Gladbrook American Legion Club Rooms 6:30 p. m.	April 30	The Management of Essential Hypertension George E. Mountain, M.D., Des Moines

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF APRIL

Cedar Falls Sartori Hospital 6:30 p. m.	April 7	The Macrocytic Anemias William P. Murphy, M.D., Boston
Atlantic Atlantic Hospital 6:00 p. m.	April 9	Chest Injuries Jerome R. Head, M.D., Chicago

WOMAN'S AUXILIARY NEWS

MRS. H. I. MCPHERRIN, *Chairman of Press and Publicity Committee*
5822 North Waterbury Road, Des Moines

President—MRS. W. R. HORNADAY, Des Moines

President Elect—MRS. F. W. MULSOW, Cedar Rapids

Secretary—MRS. M. J. MOES, Dubuque

Treasurer—MRS. A. E. MERKEL, Des Moines

OUR COUNTRY'S FIGHT FOR FREEDOM

"How effective would my country be,
If all its defenders were just like me?"

How often we have applied a similar caption to our participation in our various activities and organizations! How very important it is now that we apply that same yard stick to the measure of our contribution to our country's fight for the freedom and democracy of the world. "Freedom" and "democracy" can be mere words until they are lost. Did you read Anthony Eden's report on the Japanese occupation of Hong Kong as it affected British and Chinese women?

On the wall of the large waiting-room restaurant in the station at Karlsruhe, Germany, is a dominating portrait of Adolph Hitler. By the portrait is this quotation: "Strength consists not in the majority but in the sincerity of the will to make sacrifice. A. Hitler." Nazism exacts that sacrifice from its followers in order to gain its objectives, destructive and demoniac as those objectives are.

Democracy is America's way of life. It, too, makes its demands. It has its price as well as its privileges. If it is to survive, it calls for more zeal, more sacrifice than that devoted to the pagan ideologies rampant in the world today.

Our national president, Mrs. R. E. Mosiman, makes the following statement in her message in the Spring Bulletin: "The Woman's Auxiliary can play a major rôle in the national defense program. Health and efficiency are inseparable. We have the weapons and the understanding to wage a real campaign on health defense if we but have the determination and courage."

In a letter to Mrs. Mosiman, Miss Eloise Davidson, assistant director in the women's department of national civilian defense, says, "I suggest that you urge all your women to enroll as volunteers with the local defense councils, for their leadership in the fields of nutrition and health will be most vital in the communities where they live."

"So, you see
It's up to me."

THE SMORGAASBORD DINNER

One of the objectives of the Auxiliary is to create a spirit of friendliness among families of the medical profession. We hope to do this very thing at our Smorgaasbord Dinner to be held during the state convention at the Hotel Kirkwood, Wednesday, April 15, at 6:30 p. m. It will be an informal get-together and we hope that each doctor and his wife will get better acquainted with members from other parts of the state. We are planning an interesting program which will take us away from war worries for a little while at least. Make a date with your husband right now to attend.

BANISH THIS ENEMY

The Iowa Federation of Women's Clubs is sponsoring a bill which, if passed, will banish smallpox from our state. The bill will be introduced at the next session of the state legislature in January, 1943.

The State Department of Health and the Iowa State Medical Society have long been distressed at Iowa's smallpox record: 50,000 cases of this preventable disease in thirty years!

We, the members of the Woman's Auxiliary to the Iowa State Medical Society can help to pass this bill, but not until we are informed. Let us read our husbands' latest books on smallpox and vaccination. Let us read the State Department of Health bulletins on smallpox. Let us put the subject of "Smallpox and Its Prevention" on our club programs. Let us pass this bill.

Anna T. A. Glomset, Chairman
Public Relations

Dubuque and Jackson Counties

The Woman's Auxiliaries to the Dubuque and Jackson County Medical Societies entertained at a luncheon at the Hotel Julien Dubuque in Dubuque, Wednesday, March 18. Our guest was our state president, Mrs. William R. Hornaday of Des Moines, who spoke on "The Functions of the Auxiliary and How They Are Carried Out."

Mrs. M. J. Moes, Secretary

Adair County

The Woman's Auxiliary to the Adair County Medical Society met for a social evening meeting at the home of Mrs. A. S. Bowers in Orient, Thursday, February 26.

Mrs. Eugene Tinsman, Secretary

Madison County

Newly elected officers for the Woman's Auxiliary to the Madison County Medical Society are as follows: Mrs. John F. Veltman of Winterset, president; Mrs. I. K. Sayre of St. Charles, vice president; and Mrs. Paul F. Chesnut of Winterset, secretary and treasurer.

Mrs. Paul F. Chesnut, Secretary

Polk County

Sixty-eight members of the Woman's Auxiliary to the Polk County Medical Society met at St. John's Lutheran Church in Des Moines, Tuesday, March 3 for an afternoon program. Dr. Thomas A. Burcham of Des Moines spoke on "The Work of the Iowa Industrial and Defense Commission." At the business session it was voted to contribute to the Nurses Student Loan Fund, a recent project of the state auxiliary. It was also decided to provide hostesses twice a month for the U. S. O. Recreation Center in Des Moines and to serve coffee and cookies.

Mrs. D. H. Kast, Secretary

Waterloo Auxiliary

The Woman's Auxiliary to the Waterloo Medical Society met for a six-thirty dinner Tuesday evening, March 17, at the home of Dr. and Mrs. John E. O'Keefe in Waterloo. Twenty-six members were present. After a short business meeting, Mrs. William R. Hornaday of Des Moines, state president, presented "The Objectives and Work of the State Auxiliary." She stressed the new project, the Nurses Student Loan Fund, which is really a defense project since war has been declared and the need for nurses is so great.

NATIONAL MEETING

A few more months, and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Atlantic City, New Jersey, for their Annual Convention, June 8 to 12.

Have you made your reservations? If not, send your request at once to Haddon Hall, Atlantic City, New Jersey.

BOOK NOTES

"Breathes there a man with soul so dead
Who never to himself has said:
'I must not let things worry me!'"

With this paraphrase we introduce *In the Name of Common Sense* by M. N. Chappell, Ph.D. Although the book is not new, its universality of subject matter will justify careful reading at any time. Worry is not a natural reaction but is the result of the complexities of our civilization. The bulk of our reactions are determined by social and economic forces.

Worry is a luxury whose cost can be reckoned in terms of illness, medical expense, loss of wages, general wretchedness, irritability, fatigue, diminished appetite, constipation, insomnia and countless other unpleasant factors.

Worry is, of course, psychologic and is therefore learned; learning requires practice; forgetting depends upon learning; and finally, practice prevents forgetting. That is the whole vicious cycle. Dr. Watson discovered through a number of experiments that babies fear instinctively only loud noises and the sense of falling. All other conditions which arouse fear are learned. It behooves most of us to take stock of our fears in the light of this scientific fact.

"Emotion is an overload on the body and is properly used in moderation." No human being can function normally and harbour the consistent overload which persistent worry manufactures. Contrary to the usual belief, worry is manifested in persons of high intelligence for they are the ones who learn most rapidly. We worry about the things which we do not understand; hence, understanding is the best antidote for worry.

How are we to combat worry systematically? In the first place, discuss your personal troubles with your doctor and leave them there. "How are you?" is a greeting, not a question. When we remember that anger is aroused through limitation of activities, fear, anguish, pain and injuries to self-esteem, we can cope with irritability in ourselves and others to better advantage.

"The body cannot rest if the mind is in a state of agitation. Remove agitation and rest is achieved." Each of us needs six to eight hours of quiet rest. Relaxed rest is 95 per cent as efficient as 100 per cent sleep. The margin there is so small it might be a good fact to recall on one of those sleepless nights. We cannot expect to make ourselves over since most of us do not change fundamentally after we reach thirty years of age. However, if we make an honest effort to understand ourselves and others, there is no doubt but that we shall attain more mental peace and a fuller adjustment to life.

Mrs. K. M. Chapler

SOCIETY PROCEEDINGS

Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held at the Hotel Russell-Lamson in Waterloo, Tuesday, March 17. Following the six-thirty dinner the group was addressed by Leon J. Galinsky, M.D., of the State Sanatorium in Oakdale, on "A Partnership Against Tuberculosis."

C. D. Ellyson, M.D., Secretary

Bremer County

The combined monthly meeting of the Bremer County Medical Society and the staff of St. Joseph Mercy Hospital was held at the Fortner Hotel in Waverly, Monday, February 23. The program consisted of motion picture films on Allergic Diseases, prepared by Drs. Coca, Walzer and Harten of Brooklyn, New York, and Pernicious Anemia by William P. Murphy, M.D., of Boston, Massachusetts.

O. S. Blum, M.D., Secretary

Cerro Gordo County

Alexander E. Brown, M.D., of the Mayo Clinic, Rochester, Minnesota, was guest speaker for the Cerro Gordo County Medical Society, at a meeting held Tuesday, March 10, at the Hotel Hanford in Mason City. Dr. Brown spoke on "The Present Status of Chemotherapy."

C. O. Adams, M.D., Secretary

Des Moines County

Newly elected officers of the Des Moines County Medical Society, all of Burlington, are as follows: Dr. Daniel F. Huston, president; Dr. Elwood P. Russell, vice president; Dr. Erwin C. Sage, secretary and treasurer; Dr. Frank C. Ober, delegate; and Dr. Carl J. Lohmann, alternate delegate.

Dickinson County

The following officers were elected to serve the Dickinson County Medical Society during 1942: Dr. Herman J. Kooiker of Milford, president; Dr. Francis L. Roberts of Spirit Lake, vice president; Dr. Ruth F. Wolcott, secretary and treasurer; Dr. Thomas L. Ward of Arnolds Park, delegate; and Dr. William E. Bullock of Lake Park, alternate delegate.

Dubuque County

Dr. J. Carl Painter was named president of the Dubuque County Medical Society at the annual election of that organization. Other officers are: Dr. John A. Thorson, vice president; Dr. Carl W. Smith, secretary; Dr. Frank W. Meyers, treasurer; Dr. Henry G. Langworthy, delegate; and Dr. Matthew J. Moes, alternate delegate. All officers are of Dubuque.

Floyd County

Newly elected officers for the Floyd County Medical Society are: Dr. James E. Murtaugh of Charles City, president; Dr. Laydon S. Wentworth of Marble Rock, vice president; Dr. Ray A. Fox of Charles City, secretary and treasurer; Dr. Oscar H. Banton of Charles City, delegate; and Dr. Hillard A. Tolliver of Charles City, alternate delegate.

Fremont County

Members of the Fremont County Medical Society were guests of Dr. Brownlow B. Miller of Tabor, for a dinner and evening meeting Thursday, February 19. During the evening they were profitably entertained by moving pictures describing the use of a comparatively new anesthetic, pentothal sodium, in the performance of many and varied surgical operations. This was followed by a business meeting of the society at which time several matters were discussed, among them being the war situation as it affects the medical profession in general and Fremont County in particular. Election of officers for the current year resulted as follows: Dr. Ralph Lovelady of Sidney, president; Dr. Kenneth Murchison of Sidney, vice president; Dr. Ambrose E. Wanamaker of Hamburg, secretary and treasurer; Dr. Murchison, delegate; and Dr. Leon A. Baldwin of Riverton, alternate delegate.

A. E. Wanamaker, M.D., Secretary

Greene County

The regular monthly meeting of the Greene County Medical Society was held at the hospital in Jefferson, Thursday, March 12, with John W. Marion, D.D.S., of Des Moines, speaking on Focal Infection Pertaining to Systemic Disease. Officers of the group for 1942 are: Dr. Albert J. Jongewaard of Jefferson, president; Dr. Roy E. Parry of Scranton, vice president; Dr. John R. Black of Jefferson, secretary and treasurer; Dr. George W. Franklin of Jefferson, delegate; and Dr. Oscar C. Lohr of Churdan, alternate delegate.

J. R. Black, M.D., Secretary

Grundy County

Newly elected officers for the Grundy County Medical Society are: Dr. Hugo V. Kahler of Reinbeck, president; Dr. Charles H. Bartruff of Reinbeck, vice president; Dr. George A. Biebesheimer of Reinbeck, secretary and treasurer; Dr. Michael H. Thielen of Grundy Center, delegate; and Dr. Robert T. Spain of Conrad, alternate delegate.

Hancock-Winnebago Society

Dr. Cecil V. Hamilton of Garner was chosen by members of the Hancock-Winnebago Medical So-

cieties to head the group during 1942. Other officers include Dr. G. Howard Dolmage of Buffalo Center, secretary and treasurer; Dr. Thomas J. Irish of Forest City, delegate; and Dr. Walter F. Missman of Klemme, alternate delegate.

Hardin County

The annual election of officers for the Hardin County Medical Society resulted as follows: Dr. Rasmus R. Gaard of Radcliffe, president; Dr. V. Stanley Todd of Eldora, vice president; Dr. William E. Marsh of Eldora, secretary; Dr. Clarence M. Wray of Iowa Falls, delegate; and Dr. William A. Johnson of Alden, alternate delegate.

Humboldt County

The following officers have been elected to serve the Humboldt County Medical Society for 1942: Dr. Asa S. Arent of Humboldt, president; Dr. Cloyce A. Newman of Bode, secretary and treasurer; Dr. James H. Coddington of Humboldt, delegate; and Dr. Ralph W. Beardsley of Livermore, alternate delegate.

Ida County

The Ida County Medical Society recently elected the following officers for the current year: Dr. Glenn S. Millice of Battle Creek, president; Dr. Herbert H. Harris of Battle Creek, vice president; Dr. Wendell P. Crane of Holstein, secretary and treasurer; Dr. Robert B. Armstrong of Ida Grove, delegate; and Dr. John B. Dressler of Ida Grove, alternate delegate.

Johnson County

Andrew H. Woods, M.D., professor emeritus of psychiatry at the State University of Iowa, College of Medicine, Iowa City, furnished the scientific program for the Johnson County Medical Society at a meeting held Wednesday, March 4, at the Hotel Jefferson in Iowa City. Dr. Woods delivered an address on The Value of Frontal Brain Cortex, which was discussed by W. R. Ingram, M.D., and Olan R. Hyndman, M.D., both of Iowa City.

A. L. Sahs, M.D., Secretary

Linn County

J. Arthur Myers, M.D., professor of medicine and preventive medicine, at the University of Minnesota Medical School, Minneapolis, and chief of staff and director of tuberculosis activities for the Lymanhurst Health Center, was guest speaker for the Linn County Medical Society, Thursday, March 12. The meeting was held at the State Sanatorium in Oakdale, and discussion of Dr. Myers' address on Tuberculosis was opened by John H. Peck, M.D., superintendent of the Sanatorium.

Louisa County

The regular monthly meeting of the Louisa County Medical Society was held at Wapello, Thursday,

March 12. Mr. W. L. Ryan, county social worker, was a guest and the county contract for care of the indigent was discussed. The remainder of the evening was spent in an informal discussion of civilian defense from a medical standpoint. Ten classes in Red Cross First Aid are being conducted or have been scheduled for teaching.

J. H. Chittum, M.D., Secretary

Lucas County

Newly elected officers for the Lucas County Medical Society are: Dr. Robert E. Anderson of Chariton, president; Dr. Robert A. Hills of Russell, vice president; Dr. George F. Niblock of Derby, secretary and treasurer; Dr. Scott L. Throckmorton of Chariton, delegate; and Dr. William C. Fisher of Williamson, alternate delegate.

Madison County

Officers of the Madison County Medical Society, recently elected, are as follows: Dr. Paul F. Chесnutt of Winterset, president; Dr. Glenn J. Anderson of Winterset, vice president; Dr. Evelyn M. Olson of Winterset, secretary and treasurer; Dr. Ivan K. Sayre of St. Charles, delegate; and Dr. Harry E. Carver of Earlham, alternate delegate.

Marion County

The annual election of officers for the Marion County Medical Society resulted as follows: Dr. Edward P. Bell of Pleasantville, president; Dr. John R. Wright of Knoxville, vice president; Dr. Mellgren C. Schroeder of Pella, secretary and treasurer; Dr. Harold E. White of Knoxville, delegate; and Dr. Ernest C. McClure of Bussey, alternate delegate.

Mills County

Dr. Edgar Christy of Glenwood was named to head the Mills County Medical Society during 1942, at the recent election of officers for that group. Other officers include Dr. Thomas E. Shonka of Malvern, secretary and treasurer; Dr. Dean W. Harman of Glenwood, delegate; and Dr. Ward A. DeYoung, also of Glenwood, alternate delegate.

Pocahontas County

Members and guests of the Pocahontas County Medical Society met at the home of Dr. Fred L. Blair, Sr., in Fonda, Thursday, February 19. Walter R. Fieseler, M.D., of Fort Dodge, addressed the society, giving an illustrated talk on Bladder Malig-nancies, followed by a motion picture film on surgical technic. Officers of the group, recently elected, are as follows: Dr. Charles L. Jones of Gilmore City, president; Dr. Fred L. Blair, Jr., of Fonda, vice president; Dr. John B. Larson of Laurens, secretary and treasurer; Dr. Walter E. Gower of Pocahontas, delegate; and Dr. Lester K. Leserman of Rolfe, alternate delegate.

J. B. Larson, M.D., Secretary

Poweshiek County

Philip C. Jeans, M.D., professor of pediatrics, State University of Iowa, College of Medicine, Iowa City, was guest speaker for the Poweshiek and Jasper County Medical Societies at a meeting held in Grinnell, Tuesday, March 10. Dr. Jeans spoke on Pediatrics and showed a motion picture film entitled "When Bobby Goes to School," which illustrated the essential factors of a complete physical examination of the preschool child. Officers of the Poweshiek County Medical Society are: Dr. Luther C. Hickerson of Brooklyn, president; Dr. Delano Wilcox of Malcom, vice president; Dr. Clinton E. Harris of Grinnell, secretary; Dr. John T. Padgham of Grinnell, treasurer; Dr. Samuel D. Porter of Grinnell, delegate; and Dr. Ora F. Parish of Grinnell, alternate delegate.

Tama County

Everett M. George, M.D., of Des Moines, spoke on Management of Fractures of the Lower Extremity, for members of the Tama County Medical Society, at a meeting held in Toledo, Thursday, February 26.

Winneshiek County

Fourteen members of the Winneshiek County Medical Society assembled Wednesday, February 11, at the Hotel Winneshiek in Decorah, as guests of Dr. Ralph M. Dahlquist. Speaker for the occasion was Dr. Robert S. Shane, director of the Selective Service Board, Des Moines.

Woodbury County

The February meeting of the Woodbury County Medical Society was held at the Martin Hotel in Sioux City, Thursday, February 26, with Everett D. Plass, M.D., professor of obstetrics and gynecology, State University of Iowa, College of Medicine, Iowa City, as guest speaker. Dr. Plass spoke on Recent Advances in Obstetrics.

A special meeting of the society was held Friday, March 6, at the Mayfair Hotel in Sioux City, for the purpose of hearing a discussion on Equine Encephalomyelitis by W. McDowell Hammon, M.D., assistant professor of epidemiology in the Hooper's Foundation, University of California.

W. K. Hicks, M.D., Secretary

Wright County

Newly elected officers for the Wright County Medical Society are: Dr. Raymond G. Bird of Clarion, president; Dr. Carl A. Aagesen of Dows, vice president; Dr. John R. Christensen of Eagle Grove, secretary and treasurer; Dr. Ransom D. Bernard of Clarion, delegate; and Dr. Erle D. Tompkins of Clarion, alternate delegate.

Eleventh Councilor District Meeting

About forty-five doctors from Council Bluffs and southwestern Iowa attended the Eleventh Councilor District Meeting held at the Hotel Chieftain in

Council Bluffs, Thursday, February 12. Speakers on the program included Dr. Thomas F. Suchomel of Cedar Rapids, chairman of the Iowa Committee on Procurement and Assignment; Lieutenant General M. A. Tinley, M. C., of Council Bluffs, commander of the Iowa State Guard; Commander J. J. Freyman, representing the medical corps of the United States Naval Reserve; and Dr. Earl B. Bush of Ames, president of the Iowa State Medical Society.

MARRIAGES

Miss Catherine May Rice, daughter of Mr. and Mrs. Howard G. Rice, and Dr. Jesse T. Schwidde, formerly of Shenandoah, were married Saturday, February 28, at the home of the bride's parents in Boone. After a short wedding trip they will return to Iowa City where Dr. Schwidde is completing his internship at the State University of Iowa Hospital.

DEATH NOTICES

Burk, Frank Oscar, of Davenport, aged sixty-seven, died March 10 after a ten days' illness. He was graduated in 1907 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Scott County Medical Society.

Lashbrook, Elam Eugene, of Estherville, aged sixty, died February 26 after a short illness. He was graduated in 1906 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Emmet County Medical Society.

Ryan, Charles J., of Des Moines, aged sixty-nine, died March 8 following a five months' illness. He was graduated in 1909 from the University of Illinois, College of Medicine, Chicago, and at the time of his death was a member of the Polk County Medical Society.

Sebern, Richard Clyde, of Fort Dodge, aged sixty, died February 18 from a coronary occlusion. He was graduated in 1904 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Webster County Medical Society.

Van Ausdall, Garrett Mack, of New London, aged eighty-three, died February 27 after a year's illness. He was graduated in 1884 from the Medical College of Indiana, Indianapolis, and at the time of his death was a Life Member of the Henry County and Iowa State Medical Societies.

MEETING OF THE IOWA DIABETIC ASSOCIATION

The Iowa Diabetic Association will meet at one p. m. Thursday, April 16, in Dining Room No. 1 at the Hotel Fort Des Moines, for the purpose of completing organization plans. Luncheon will not be served at this meeting.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

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Medical History of Webster County

By WILLIAM W. BOWEN, M.D.,
Fort Dodge, Iowa

(Continued from last month)

Dr. C. H. Churchill

Dr. Churchill was born in Madison County, Wisconsin, May 21, 1858, the son of E. A. and Laura (Powers) Churchill. The family later removed to Webster County about ten miles from Fort Dodge in 1866. When Dr. Churchill was nineteen years of age he entered Cornell College at Mount Vernon, Iowa, where he remained one year, later attending Rush Medical College in Chicago from which institution he received the degree of doctor of medicine in 1886. He began the practice of medicine in Lehigh where he remained until 1898 when he moved to Fort Dodge. He married Miss Cora Doud and they had two sons, Charles and Parks Bradford. Mrs. Churchill died in 1901 and after a time he married again, but had no children by the second marriage. He left Fort Dodge about twenty years ago and took a position with a mining company. After a few years he returned to Fort Dodge but remained only a short time and took another position with a mining company. He has since died. Dr. Churchill was a gentlemanly man, but not too tactful in handling people. For instance, a committee once waited upon him in the interests of some charity. The doctor talked freely and rather offensively to the committee and apparently blamed them for soliciting him, but finally did contribute to the charity, only to make enemies of every member of the committee. If he had made his contribution without offensive words they would have been his friends; or if he had refused the contribution pleasantly, he still would have retained their friendship.

Dr. Robert Evans

Dr. Robert Evans was born in the province of Ontario, Canada, in 1857, the son of Joseph and Mary Doyle Evans, both natives of Ireland. He was educated in the public schools of his native

land after which he taught school for five years. He entered the Detroit College of Medicine from which he was graduated in 1888. He entered practice in La Crosse, Wisconsin, where he had a brother Edward who was practicing, although he was not associated with him. He came to Fort Dodge in 1891 and built up a magnificent practice. In 1908 he associated himself with Dr. Mulroney and Dr. Bowen. After fifteen months Dr. Mulroney withdrew from the partnership and Dr. Evans and Dr. Bowen continued together for twenty-four years until Dr. Evans retired in the spring of 1932. In the fall of 1932 Dr. Evans died suddenly at his home of a stroke.

He married Miss Mercie Thompson of La Crosse in 1896. They had no children, but they raised two orphan nieces, Sarah and Kathryn Thompson. Dr. Evans was one of the most polite of men and could refuse a request without giving offense except when some one asked him to produce an abortion, and that happened to him occasionally as it does to any doctor. His office help could always tell when it happened for there would be a roar from his office and he would be heard to say "I won't commit murder." This would be immediately followed by some one coming out of the office, crestfallen and hurriedly. Sometimes he would follow the crestfallen one as far as the elevator, scolding at them. He was a good Catholic and a good man, and the most beloved man in the community whether in or out of the profession. He early turned his attention to surgery and soon became the best known surgeon in the vicinity, but he was a poor business man. When he went into partnership with Mulroney and Bowen it was found that for several months previous to that time he did not have a single account on his books. Nevertheless he retired with a comfortable fortune, due largely to the business acumen of his wife.

For many years Dr. Evans took a postgraduate course every year, usually at Johns Hopkins University, where he knew all the faculty and the great surgeons personally. He was very fond of his brother Edward in La Crosse and they would often attend medical meetings and do postgraduate work together. He was an omnivorous reader and could remember what he had read and who wrote it. It was a matter of common remark among his doctor friends. Some one would ask what he knew on any subject. He would stop and think a few minutes, go to the library and after a few minutes come back with a volume open and say "Here it is." He loved to gather with a few of his friends and sit and tell anecdotes, mostly from his own experiences. Here is one of them: "Jack Mulroney ran a grocery store and it was a hang-out for all the Irish loafers in town. He had some boxes and benches for them to sit on and to whittle on. One day a lady went by on the opposite side of the street with a dachshund on a chain, the first one in town. Dick Manning said 'Look at that little dog over there. See, he is a dog and a half long and half a dog high.'

Dr. William W. Bowen

Dr. Bowen was born in Marion, Illinois, June 15, 1869. That is in the part of Illinois called Egypt. When he was a baby, his parents moved to Rock Island County, Illinois, locating just across the river from Muscatine. When he was fifteen they again moved to Kossuth County, Iowa, locating near Algona. There he attended the public schools and the Northern Illinois Normal School in Dixon, Illinois. He was graduated from the Medical Department of the State University in 1895, and a month later located in Whittemore, Iowa. He stayed there five years and sold his practice and home and went to Berlin, Germany, for a year. He located in Fort Dodge in 1901 and practiced there until March, 1940, when he retired. For twenty-four years he was a partner of Dr. Evans until Dr. Evans retired. It was the policy of the two doctors to do some postgraduate work every year and they each did that for nearly twenty years. They built up a large surgical practice. Dr. Bowen has belonged to the Iowa State Medical Society about forty-five years. He has been president of the staffs of both the Mercy and the Lutheran Hospitals. He was president of the X-Ray Club of Iowa, Twin Lakes District Medical Society, the Austin Flint-Cedar Valley Medical Society, and the Iowa State Medical Society. He was a Charter Fellow of the American College of Surgeons, which was organized in 1913, one of twenty charter fellows from Iowa, and two years

later he became a charter member of the Radiological Society of America.

When Dr. Bowen retired, his fellow practitioners gave him a banquet which was attended by doctors from all parts of the state and some from outside the state, which was appreciated to the full by Dr. Bowen. Drs. Evans and Bowen built up a fine library which came to Dr. Bowen from Dr. Evans and was presented by Dr. Bowen to Mercy Hospital upon his retirement. It has been augmented since that time, and Mercy Hospital now has a very fine library.

He was married to Miss May King on August 11, 1895. They have raised two children: Harold who lived in Missouri, and Lydia, who is married to Dr. W. R. Ingram, head of the Department of Anatomy at the State University of Iowa, College of Medicine, in Iowa City.

Dr. Charles J. Saunders

Dr. Saunders was born in Iowa City, Iowa, February 26, 1862, the son of John A. Saunders and Katherine Murry Saunders. His mother was a native of Athlone, Ireland, while his father was born in London, England. They met and were married in Rochester, New York, and later moved to Iowa City in 1854. Charles attended St. Joseph's Institute and was graduated from the Iowa City High School as valedictorian of his class. He then studied medicine and was graduated from the University Medical School in 1885. There were no internes at that time, but he was taken into the office of Dr. Elmer Clapp, professor of anatomy as well as a practicing physician in Iowa City. He entered practice in Audubon, Iowa, and then moved to Clare, Iowa, in 1887. He remained there until 1893 when he came to Fort Dodge. During that time he attended the Polyclinic Hospital and Medical School in Chicago, and in 1893 he spent several months in Europe. While in Clare he was very prosperous. In addition to practicing medicine he operated a drug store and organized a bank. After coming to Fort Dodge, he acquired interests in nearly all large enterprises. He was the largest owner of stock in the Street Car Company, was interested in the Telephone Company, the First National Bank, The Oleson Land Company and the Northern Iowa Land and Livestock Company. However, the depression hit him very hard. The Northern Iowa Land and Live Stock sold all its holdings and had about \$300 a share in cash. Dr. Saunders had a great number of these shares. The manager without consulting the others in the company invested it all in land again and within two years it was not worth one cent a share. The

two banks in which he was interested failed, and when he died he was not a rich man.

He was interested in various civic and professional organizations, and was one of the organizers of the Elks Club, the Rotary Club and the Country Club. He also was one of the organizers of the Fort Dodge Doctors Club which finally developed into the Webster County Medical Society. He was one of the organizers and president of the Fort Dodge District Medical Society which was discontinued after the State Society was reorganized. He was president of the Iowa State Medical Society in 1923, and was always very active in it. He was married at the age of forty-five in 1907 to Miss Lucy B. Merrill, and they had one son and two daughters.

Dr. Saunders, notwithstanding his many duties, had a sense of humor and was often the perpetrator of some rare jokes. At the time he was living in Clare the song about Dan McGinty was very popular. You will remember it went something like this: "Down went McGinty to the bottom of the sea. He was dressed in his best suit of clothes," etc. Father Darcy, the priest in Clare, a rare and good old gentleman, announced one morning in services that he had received a letter from Mrs. Daniel McGinty asking for a mass for the repose of the soul of Daniel McGinty, who died at sea. Father Darcy proceeded to say the mass, and after it was over the parishioners began asking each other who Daniel McGinty was. Eventually it was found to be a hoax. A reporter for a syndicate of newspapers heard of it and in a week or two the story appeared in most of the newspapers in the United States together with pictures of the church and Father Darcy and others concerned. Dr. Saunders never admitted doing it, but he got the credit for it from the people thereabout, and from Father Darcy also. Dr. Russell in telling about it said "Talk about Hannibal, who swore eternal vengeance against the Romans. 'Twas nothing to the eternal vengeance that Father Darcy swore against Dr. Saunders."

Dr. Saunders died February 18, 1928. About two or three years before that time he had been ill, and had been operated upon for an intestinal obstruction. It was found that he had an intussusception of the colon due to a tumor of the colon. Intussusceptions in adults are usually due to tumors in the intestine and a large portion of the tumors are malignant. The intussusception was reduced and the tumor with six inches of intestine was resected. He made a good recovery and for a while was in better condition than he had been for some years. Later he became more ill and weak. At last he went to the hospital and

blood was taken for examination but he died before the blood count could be made. It was found that he had acute lymphatic leukemia. At autopsy no evidence of recurrence of the carcinoma was found, although microscopic examination of the resected tumor showed it to be carcinoma.

He was a good man and a good practitioner and made a profound impression on the profession and the community. He was always a pacifier and smoothed the differences among the doctors; it was largely due to him that the doctors got along so well together.

He was the first of the graduates from the "University of Clare", that is, the first to come from Clare to Fort Dodge. The others are Drs. Russell, Dorsey and Galvin, and were named graduates from the University of Clare by Dr. Russell.

Dr. Orin M. Wheeler

The Wheeler family came from Durham County, England, and the forefather of the Wheelers in this country was a member of the party who came to Massachusetts in the Mayflower on her first voyage. For several generations the Wheelers lived in Massachusetts and then a portion migrated south. From that branch of the family came General Joe Wheeler of the Southern Confederacy. Another portion migrated to Vermont and from that branch Dr. Orin Wheeler sprang. He was born in Royalton, Vermont, in 1845. The family moved to Illinois during his boyhood. When he reached the proper age he entered and was graduated from the College of Physicians and Surgeons in Keokuk, Iowa, in 1863. After his graduation he located in Hollowayville, Illinois, where he followed his profession for twelve years. He then moved to Poweshiek County where he bought a farm. He located in Fort Dodge in 1895, and died there in 1900 at fifty-five years of age. While living in Illinois he married Miss Mary Jane Kies of Bureau County. They raised four children: Charles K., Joe, Allen A. and a daughter Edna. The doctor was a man of unusual cordiality, ingratiating himself with others without effort. Although he lived here only a few years, he left a host of friends and patrons, and a wonderful family. The boys all became traveling salesmen and unusually good ones. All his children inherited the friendliness of their father, which is so spontaneous and sincere that they are liked by every one. The doctor was a staunch Methodist and a Free Mason.

Dr. Arthur Henry McCraight

Dr. Arthur Henry McCraight was born on a farm in Mercer County, Illinois, on July 25, 1866. He was the fourth in a family of eight children.

His father, John Willis McCreight, had moved there from Ohio in 1851. His ancestors on his father's side came from Ireland in 1772 and settled in South Carolina, later moving to Kentucky and Ohio. His mother, Rebecca Nevius McCreight, was the first white child born in Mercer County, Illinois. She was of Dutch descent, a great-grandfather having been third secretary of New Amsterdam under the Dutch and first secretary of New York under the British.

Dr. McCreight attended the rural schools of the neighborhood and was graduated from the Academy at Aledo, Illinois, and the Illinois Normal University at Normal, Illinois. He taught school for six years to enable him to finance his way through Rush Medical College in Chicago, Illinois, from which he was graduated in 1897. During his summer vacations, he sold school supplies and subscriptions to educational journals to county teachers' institutes. On several of these trips he visited Fort Dodge and was so favorably impressed that he located here in the summer of 1897.

In 1899 Dr. McCreight was married to Miss Margaret Cromwell; they had one daughter, Rachel, who married James I. Dolliver. A son, Clifford, was adopted. Mrs. McCreight died in 1920. In 1926, he married Mrs. Mable Johnston who survived him.

Dr. McCreight was a general practitioner who specialized in obstetrics and children's diseases. While no accurate records were kept of the number of deliveries in his practice, it was estimated to be well in the thousands. Many mothers he cared for had been his patients as babies.

Always intensely interested in new developments in medicine Dr. McCreight kept abreast of the times by frequent visits to the medical centers of the east. The winter of 1913-1914 was spent with his family in Europe where he studied in the hospitals in Vienna and Berlin.

During the World War, Dr. McCreight served as a Captain in the Medical Corps stationed in the Base Hospital at Camp Dodge, Iowa. He was Webster County coroner for three terms and was for many years the medical member of the county board of Insanity Commissioners. He served as head of the Obstetrics Department and Chief of Staff for Mercy Hospital and was a member of the advisory committee for the Lutheran Hospital. For many years he was a member of the Fort Dodge Board of Education. Dr. McCreight was a Trustee of the First Congregational Church and of the Salvation Army. He was a member of the Rotary Club and the Masonic Lodge.

Dr. McCreight died March 28, 1934, after a week's illness with pneumonia. He had practiced medicine in Fort Dodge for over thirty-six years.

Dr. Edward D. Morrison

Dr. Morrison was born in Fort Wayne, Indiana, December 21, 1876, the son of Thomas J. and Anna B. Touhey Morrison. While he was a small child his parents moved to Grand Junction, Iowa, where the future doctor received his early education in the public schools and St. Mary's Academy in Grand Junction. His parents allowed him to go to Pittsburgh, Pennsylvania, to enter the office of his uncle in an iron works which his uncle owned. While there a workman fell and dislocated his ankle. He lay there roaring, with a crowd around him and his foot hanging from the leg at right angles. Morrison gave orders to some men to hold him, straightened the foot out and relieved the pain at once. That event determined Morrison to become a doctor. He returned to Iowa and to Valley Junction, where his parents lived at that time. He soon entered the Iowa College of Physicians and Surgeons, later affiliated with Drake University, and was graduated in April, 1901.

Shortly afterward he located in Moorland, Iowa. The railroads crossed there and it was expected that the shops would be located there and that Moorland eventually would annex Fort Dodge. Dr. Morrison soon had a fine practice around Moorland and a delegation from Barnum induced him to go to Barnum.

Dr. Morrison was married to Miss Adelle Blakeley. She acquired asthma while in Barnum and he moved to Fort Dodge, to avoid the pollen in Barnum. The change did not help and the family moved to Collins, Colorado. The climate was no better there and they returned to Fort Dodge in 1910. Mrs. Morrison became much better but died of other causes in 1938. They have two grown daughters.

Dr. Morrison was the first volunteer from Fort Dodge during World War I. He entered service in May, 1918, was in Southampton, England, in August and in Alsace in September. After the Armistice he was given a postgraduate course in the University of Toulouse, France, and was honorably discharged in the fall of 1919 with the rank of Captain.

(To be continued)

HOBBY SHOW

A limited amount of space is available in the Hobby Show to be presented in connection with the annual meeting of the State Society. Any doctor who wishes to bring an exhibit is asked to write the chairman, Dr. Jeannette Dean-Throckmorton, State Medical Library, Des Moines, at once, so that space may be reserved.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD—By William E. Ladd, M.D., professor of child surgery; and Robert E. Gross, M.D., associate in surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

ACCIDENTAL INJURIES—By Henry H. Kessler, M.D., attending orthopedic surgeon, Newark City Hospital. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1941. Price, \$10.00.

ARTHRITIS IN MODERN PRACTICE—By Otto Steinbrocker, M.D., assistant attending physician, Arthritis Clinic, Bellevue Hospital. W. B. Saunders Company, Philadelphia, 1942. Price, \$8.00.

CARDIAC CLASSICS—By Fredrick A. Willius, M.D., and Thomas E. Keys, M.D., The Mayo Clinic. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

CLINICAL HEMATOLOGY—By Maxwell M. Wintrobe, M.D., associate in medicine, Johns Hopkins University. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

HEMORRHAGIC DISEASES—By Kaare K. Nygaard, M.D., former fellow in surgery, The Mayo Foundation. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

INFANTILE PARALYSIS—A Symposium Delivered at Vanderbilt University in April, 1941. Published by the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York. Price, \$1.25.

MEDICAL CLINICS OF NORTH AMERICA, November, 1941, Military Medicine—W. B. Saunders Company, Philadelphia, 1941. Price, \$12.00.

RHEUMATIC FEVER IN NEW HAVEN—Edited by John R. Paul, M.D., professor of preventive medicine, Yale University School of Medicine. Science Press Printing Company, Lancaster, Pennsylvania, 1941. Distributed by the Milbank Memorial Fund, 40 Wall Street, New York. Price, \$1.00.

TECHNIC OF CONTRACEPTION CONTROL—By Robert L. Dickinson, M.D., and W. E. Morris, M.D. The Williams and Wilkins Company, Baltimore, 1941. Price, fifty cents.

TEXTBOOK OF PEDIATRICS—By J. P. Crozer Griffith, M.D., emeritus professor of pediatrics, University of Pennsylvania; and A. Graeme Mitchell, M.D., professor of pediatrics, University of Cincinnati. Third edition, revised and reset. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

THE MARCH OF MEDICINE, New York Academy of Medicine Lectures to the Laity, 1941—Columbia University Press, Morningside Heights, New York, 1941. Price, \$2.00.

THE NEW INTERNATIONAL CLINICS, Volume IV, New Series Four—Edited by George M. Piersol, M.D., professor of medicine, Graduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1941.

THE 1941 YEAR BOOK OF PEDIATRICS—Edited by Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

THE 1941 YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY—Edited by Charles F. Painter, M.D., orthopedic surgeon to the Massachusetts Women's Hospital, Boston. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

BOOK REVIEWS

IMMUNITY AGAINST ANIMAL PARASITES

By James T. Culbertson, M.D., assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University, Columbia University Press, New York, 1941. Price, \$3.50.

According to Culbertson, the study of immunity in the parasitic infections took its first form and direction with the publication in 1929 of W. H. Talliaferro's book, "The Immunology of Parasitic Infection". It refers to nearly all the significant papers which appeared before its publication.

Culbertson has attempted to bring the knowledge of immunity against animal parasites up to date. His well written monograph, with its extensive bibliography, will long serve as an outstanding reference work in this field. Natural resistance and acquired immunity are discussed in Part One, immunity in specific diseases in Part Two, and applied immunology in Part Three.

R. F. B.

WILLIAMS' OBSTETRICS

Edited by Henricus J. Stander, M.D., professor of obstetrics and gynecology, Cornell University Medical College. D. Appleton-Century Company, New York, 1941. Price, \$10.00.

This recent revision of Williams' Obstetrics has brought up to date an outstanding obstetric text. In truth the book has been virtually rewritten; most of the chapters have been rearranged to conform with the newer concepts in obstetrics. Data

gained from recent investigations regarding vitamins, toxemias of pregnancy and x-ray pelvimetry have been included. Discussions which should inspire the busy practitioner to keep up with "what's new" in obstetrics are included in the chapters on the toxemias of pregnancy, contracted pelvis, amnesia and analgesia in labor and cesarean section. Three new chapters embracing discussions on diseases and abnormalities of the newborn child, classification of abnormal and contracted pelvis and causes of sudden death and maternal mortality have been added. Dr. Stander and his corps of consultants and assistants are to be highly praised for the success of their efforts in improving an already outstanding textbook on obstetrics.

A. W. B.

A TEXTBOOK OF OPHTHALMOLOGY

By Sanford R. Gifford, M.D., professor of ophthalmology, Northwestern University Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$4.00.

This 1941 text is a revision of the first or 1938 edition and richly deserves its first rank position as an ophthalmologic reference for the general physician. It is completely indexed and so edited that the more common disorders of the eye are adequately emphasized; many are illustrated by colored cuts.

During the past few years several therapeutic agents have been evolved which are of inestimable value in the treatment of ocular pathology. Thus the indications for the employment of the sulfonamide derivatives, heparin, Vitamin A, thiamin chloride and riboflavin are outlined. Another chapter

which should be of particular interest and stimulation to the internist is that portraying the present concept between ocular fundus changes and cardiovascular disease. In a condensed, understandable manner this chapter outlines the various stages and degrees of arteriolar retinal vessel changes which are of significance as an aid in determining the degree of vascular pathology present, which in itself is of prognostic value.

Conjunctivitis, which is the most commonly encountered pathologic condition of the eye, is given the space it deserves. The miraculous response of acute gonorrhreal, trachomatous, pneumococcic and inclusion conjunctivitis to sulfonamide therapy is comparable to the results obtained by the use of quinine in malaria. The simplified technic of determining the manifest visual acuity of the preschool or young child, is outlined so that early correction of defects and convergent strabismus can be advanced. The therapeutic management of minor foreign bodies in the eye, and their more severe sequelae, corneal ulcers, if treatment is mismanaged, is outlined in detail.

In addition to traumatic injuries there are a number of eye disorders which incapacitate the individual. The etiology and differential diagnosis of these are duly evaluated. Among the inflammatory types may be mentioned ulcers of the cornea, iritis or iridocyclitis and inflammatory glaucoma. Included in the non-inflammatory type are non-inflammatory glaucoma, cataract and retinal-vascular disturbances. One short chapter is devoted solely to therapeutic agents employed in ophthalmology; a notation opposite each drug shows the condition for which it is indicated.

The appendix devotes itself to the method of appraising the loss of visual efficiency resulting from the loss of ocular function due to trauma or disease. Necessarily this chapter is of most interest to those endeavoring to determine a fair compensation settlement; therefore, it is most useful to those engaged in industrial ophthalmology.

C. C. J.

DISEASES OF THE EYE

By Charles H. May, M.D., consulting ophthalmologist to Bellevue Hospital, New York. William Wood and Company, Baltimore, 1941. Price, \$4.00.

In common with earlier editions, this book is a thoroughly concise systematic text on eye disease, written in language clearly understandable to the medical student and general practitioner in medicine. Most of the subject matter is briefly handled but the more common diseases are given thorough consideration; the more rare eye conditions of interest primarily to the ophthalmologist receive only brief mention.

This new edition has been brought up to date. The newer drugs, therapeutic methods and recent additions to diagnostic apparatus, to the extent that they are of value in eye disease, are given brief

but appropriate evaluation. The chapter on ocular injuries includes the report of the committee of the American Medical Association on appraisal of loss of visual efficiency with diagrams and tables to clarify and determine percentages of loss for industrial cases. This is of particular value to the physician whose practice is among industrial classes where eye injuries are common. The final chapter in the book is on ocular manifestations of general disease. Such a chapter could be of great value both to the general practitioner and to the oculist, but many of the headings are treated with such extreme brevity that too little enlightenment is given.

The volume closes with an appendix on the ocular requirements for admission to the Army, Navy, Marine and Aviation Services which prevailed at the time of publication. The book has been prepared for use by the general practitioner, and as such, it should meet the requirements.

G. A. M

A PRIMER ON THE PREVENTION OF DEFORMITY IN CHILDHOOD

By Richard Beverly Raney, M.D., associate in orthopedic surgery, Duke University School of Medicine. Published by the National Society for Crippled Children in the United States of America, Elyria, Ohio, 1941. Price, \$1.00.

In a review of this book it becomes necessary to evaluate the results which probably will be attained from its use. In this connection it should be pointed out that this book is a primer and will be sold to public health workers, not to orthopedic surgeons.

The author lists nineteen conditions which cause deformity. The reviewer doubts that there is any lay person in public health work who is capable of correctly diagnosing these nineteen conditions, and without a proper diagnosis he or she cannot turn to the proper chapter for instruction. Of these nineteen subjects, two are responsible for a high percentage of all deformities which are amenable to prevention; these are rickets and fractures. Of these two, fractures are far and away the greatest cause of deformities which can be prevented. The author lists twenty-two paragraphs on fractures of various parts of the body. In all but two of these the "prevention of deformities" is given as "place the bones in position, apply a cast or splint until healed and then use heat and massage". The people to whom this book is directed are laymen and nurses and are hardly qualified to evaluate fractures and decide which can or should be treated by cast and splint and which require more efficient means of treatment. Since deformities are the result of early improper handling of fractures it seems obvious that these cases should be seen and managed by those trained in orthopedic surgery. This same reasoning applies in a lesser per cent but in as high a degree in all other eighteen conditions.

From the author's standpoint the volume is well handled. If he had shown deformities which arise

from each condition, deformities due to improper direction and handling, his book could accomplish much when placed in the hands of the untrained. However, the reviewer sincerely believes this book, in its present form, should not be recommended for the untrained public health worker. F. L. K.

INFANTILE PARALYSIS (ANTERIOR POLIOMYELITIS)

By Philip Lewin, M.D., associate professor of bone and joint surgery, Northwestern University Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$6.00.

Dr. Lewin has been eminently successful in gathering together, in an extremely readable volume, all the present-day knowledge of infantile paralysis. Its presentation from early history, through etiology and epidemiology, to diagnosis, treatment and prognosis is logical and forcibly expressed. The many tables, especially those concerning diagnoses in individual muscle paralysis, and others relative to differential diagnosis, make it easy for the general man to find material without need for voluminous reading. The many diagrammatic drawings add greatly in the interpretation of deformities. Dr. Lewin describes Sister Kenny's methods but he is guarded in his comments on these recent departures from orthodox procedures. In the section on operative treatment, corrections of all the common deformities are described. These, of necessity, are largely in abbreviated form but are accompanied by excellent step-by-step illustrations.

This monograph is highly recommended to the profession, first because of the unquestioned experience and ability of the author, and second, because of its completeness in covering the subject in simple, terse language. D. C. C.

SYNOPSIS OF GENITO-URINARY DISEASES

By Austin I. Dodson, M.D., professor of genito-urinary surgery, Medical College of Virginia. Third edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.50.

This handbook, or manual, is the third of two previous and very similar editions. Afflictions of the urogenital system are considered in an admirable manner. Since the book is small and limited to 292 pages, the subject matter must necessarily lack detail. Yet, due to careful study of arrangement and brevity of description, it is remarkably complete. There is a liberal use of schematic illustrations. Thus its value is enhanced in the hands of one who deals with the clinical problems of urology.

The apparent purpose in this later edition is to cover advances in urology up to the present time. Each of the twelve chapters shows a number of recent changes. The chapter on internal medicine presents several drugs not previously considered. The treatment of genito-urinary infections by the various sulfonamides and their derivatives is discussed.

This edition is especially well written. Italics are used in order to stress importance where intended; and there is a revision of sentence and phrase structure in order to clarify the subject and increase the reading and study value.

W. R. H.

THE 1941 YEAR BOOK OF GENERAL THERAPEUTICS

Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

This book follows the general pattern of the Year Book series. Some mention and brief reviews of practically every therapeutic advance of 1941 are noted.

About one hundred pages are devoted to reviews related to the sulfonamide group, and many articles on transfusion are noted. Vitamins and hormones, too, have several pertinent reviews. One looks for a reference to Paige's work on the treatment of hypertension with kidney extracts but it is not mentioned. The subject of burns, at this time especially, seems not to be covered as fully as it might be.

However, one should not detract from the general value of these yearly summaries and there is no other single volume which gives its possessor as wide a survey each year as do those of the Year Book series.

R. N. L.

A MANUAL OF PHARMACOLOGY

By Torald Sollmann, M.D., professor of pharmacology and *materia medica*, School of Medicine, Western Reserve University. Sixth edition, entirely reset. W. B. Saunders Company, Philadelphia, 1942. Price, \$8.75.

The preface states "This manual of pharmacology aims to furnish a rather comprehensive outline of current knowledge and conceptions of drug actions, especially from the point of view of their practical importance in medicine, therapeutics and toxicology" and the reviewer feels that this purpose has certainly been accomplished. This sixth edition has been entirely reset from the fifth edition published in 1936. It is a large volume of "Gone With the Wind" length. The advances in all respects of medicine have been so extensive that an attempt to include all the developments would result in a much larger book. A bibliography of over one hundred pages gives a list of authors and papers appearing since 1921; this section makes the manual valuable for a reference work as well as a text.

The general arrangement of the text follows the previous editions. All the various actions of a drug are described under its heading. There is much small type which sets forth data consulted only on special occasions. The vitamins warrant about forty pages of discussion and the sulfonamides, anesthetics and hypnotics, synthetic autonomic agents and antimalarial agents, among others, have been thoroughly covered. There is a wealth of information in this book.

E. W. A.

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RHINOPLASTY FROM THE COSMETIC POINT OF VIEW*

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There are several aspects to the subject of rhinoplasty with which we as rhinologists should be thoroughly familiar if we are to avoid the pitfalls which await the unwary. It is important to bear in mind that a large proportion of the patients who seek our advice in this connection present psychologic problems that require a different approach from the purely physical aspect of the case. One must be able to estimate the degree of mental stress from which the patient is suffering as well as to diagnose the extent of deformity.

Roughly speaking there are three different classes of rhinoplastic procedures: first, those which are indicated for the restoration of the respiratory function; second, those which are necessary for the repair of deformities caused by disease or trauma; and third, those which are done for purely esthetic or cosmetic reasons. A large proportion of all the cases with which I have had to deal come easily within the last group. Since many of these involve rather minor defects and frequently occur in individuals who are emotionally unstable it is extremely important that one should be fully acquainted with the patient's background and mental state before offering any advice.

In cases where the deformity is the result of trauma or disease the problem is not so difficult; it is easy to understand the patient's frame of mind since the deformity is obvious and readily perceived by the most casual observer. This group includes the deformities resulting from inadequately treated fractures, the saddle nose due to previous infection and scarring or loss of substance caused by trauma or disease. Here there can be no question about the necessity of operation and the psychologic aspect is less of a factor than in the cases where the deformity is developmental or inherited.

There is, however, a large group of patients who

come to the surgeon for relief of a condition which is out of proportion to the degree of mental stress from which the patient is suffering. In many of these cases the deformity is so slight that the average person would hardly consider it worth mentioning, much less subjecting himself to an operation. Yet, to many individuals the slight deviation from the ideal assumes such magnitude that it becomes an obsession. As a result they become self-conscious, often morbid, develop a marked inferiority complex and fail to maintain a normal relationship to their environment. Such a condition is particularly bad when it affects a male because the inhibitions thus developed interfere markedly with the patient's ability to function at his vocation.

Before offering any advice to patients in this class it is necessary to evaluate certain factors which I should like to enumerate as follows:

1. The patient's conception of what is wrong with his nose.
2. The length of time during which the condition has been causing annoyance.
3. Has the patient been the subject of comment or ridicule because of the deformity?
4. The social and economic status of the patient.
5. The status of the patient's features in general as well as his or her approximate physical make-up.

Some of these factors will be apparent from the patient's own statements while others will be gleaned through the physician's observations during the course of the interview. To the discerning mind it should not be difficult to select the cases in which the deformity has been or become an obsession. These are the patients who have had the thing on their minds for years; they are overly serious in their description of what is wrong; they ramble a great deal, are exceedingly voluble and have more or less vague ideas as to what should be done. Frequently they are unprepossessing apart from the nasal deformity, which makes the situation still more difficult. Patients of this type

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will never be satisfied regardless of who operates or what is done. Obviously a slight change in the shape of the nose can scarcely achieve enough of a change in the general ensemble to be noticeable, and what these patients want above all else



Fig. 1. Receding chin and forehead detract from a perfect rhinoplasty.

is for their friends and acquaintances to be aware of an improvement. Furthermore, it must be borne in mind that even the most perfect nose the surgeon could sculpture would in no way alter a sloping forehead, receding chin, thick lips or other abnormal features. (See Figure 1.) An abnormally long or thick nose may be reduced to average proportions and to some degree mitigate an unprepossessing physiognomy but it can in no sense of the word make the patient good-looking if the other features are abnormal.

Patients of this type must be handled carefully and the circumstances explained tactfully, yet thoroughly, so that there may be no misunderstanding as to how much can be accomplished. Photographs and, if necessary, models of the patient's face must be used to demonstrate the exact status of the patient's features and to point out the prob-



Fig. 2. Previous incomplete operation, dorsum uneven, columella too prominent. Corrected by resecting proper amount of cartilage.

able result which might be expected from a contemplated procedure. It is safer to promise too little than too much. An axiom worth remembering is that the more marked the deformity the better the chances for success, and conversely the less marked the deformity the more difficult it will be to attain a satisfactory result.

In cases where the patient's ideas, as to the extent of the deformity and the changes desired, are out of proportion to the facts and beyond reasonable expectancy of surgery, it is best that the patient be turned away unless he can be made to see eye to eye with the surgeon. For instance any patient who comes in fortified with numerous photographs clipped from a magazine or with the statement that she wants a nose like Hedy Lamarr's, immediately places herself beyond the pale of justifiable surgery because even if the surgeon could duplicate the desired proboscis he would still fall short of duplicating the face.



Fig. 3. Patient insisted that the bone not be touched, wanted only to have nose shortened. This was contrary to the indications which should have included a reduction of the kyphosis. Result: the nose is still curved.

On the other hand, if the abnormality is definitely understood, if it is apparent in the same degree to both patient and physician, and if it is amenable to surgery, gratifying results can be obtained. In other words, if the physician is convinced that the patient fully understands just how much can be accomplished by the operation, satisfactory results can be obtained provided of course that the surgery is adequate. This is particularly true with patients who are in the wage-earner class to whom an abnormally shaped nose may be a hindrance. Patients in this group are more easily satisfied than those belonging to the leisure class. Women who have no vocation or major responsibilities usually have more time on their hands than is good for them and are likely to concentrate on minor defects to the point where their importance



Fig. 4. Very slight deformity. Extremely difficult to correct without risk of doing too much. Justifiable only if patient is a professional to whom a perfect profile is essential.

is exaggerated. One must particularly beware of patients who have already been subjected to several plastic procedures. Unless the previous surgery has been grossly inadequate and the deformity is still very noticeable the patient should be dissuaded from any further operative interference. Figure 2 is an example of a previously incomplete operation in which subsequent surgery was not only advisable but extremely satisfactory. Naturally the degree of scarring and loss of tissue will have much to do with the prospects of successful repair. These factors must be thoroughly explained to the patient before any work is undertaken. Figure 3 is an example of inadequate surgery. The correction of a very slight deformity is shown in Figure 4, and Figures 5, 6 and 7 illustrate different types of deformities and improved esthetic results from proper balancing of the nose to the other features.

In addition to the last named types, certain other factors inherent in the local conditions often militate against the probability of achieving perfect results. I have already mentioned unprepossessing features, such as a receding forehead, receding chin and thick lips, as detracting from a pleasing ensemble. We can do very little to improve such features except in the case of the receding chin which can be built up with cartilage. The other factors to which I allude are deep scars involving the nasal cartilages, a thick skin overlying the cartilaginous portion of the nose and chronic acne or eczema. Old deep scars are frequently associated with more or less atrophy and distortion of the cartilages so that it is never possible to achieve perfect alignment without visible scars. The patient who expects invisible scars in these cases will be sorely disappointed and it is a mistake to promise it. Deforming scars associated

with distortion and atrophy of the cartilage can, to a large degree, be mitigated but seldom eliminated.

Likewise a skin covering of the lower half of the nose which is thick or one which has been the site of chronic acne or eczema will often make it difficult successfully to carry out the several procedures required for the reduction of a large or thick nasal tip. If only a moderate amount of cartilage is removed, the thick skin maintains the original contour until the gap is bridged by fibrous tissue replacing the excised cartilage. If too much cartilage is removed the skin may fail to contract sufficiently and a noticeable dimple will result which causes no end of embarrassment. In this type of case the proper procedure is to remove the whole thickness of the tip, but many patients are unwilling to submit to this operation because of the resulting scar. It is extremely important in this type of case that the patient fully understand the circumstances before any surgery is attempted.

From the purely psychologic point of view much can be done to allay the patient's apprehensions and to build up his self-confidence. This can be done without making light of the operation. Every operation involves a certain amount of risk in addition to the discomforts attending the convalescence, particularly in surgery involving the bony portion of the nose. These points must be explained to the patient, and one must also stress the precautions which are taken to prevent infection and alleviate the postoperative discomforts. A judicious amount of flattery goes a long way with most women and when sympathetically administered helps a great deal in dispelling the patient's fears and overcoming their inferiority complex. Naturally it must be employed only in such cases as are amenable to surgery and must be supplemented by helpful hints as to facial make-up and dress. Such things as the care of the skin, general hygiene, suitable hair dress and becoming hat



Fig. 5.

styles tend to enhance those features which are more attractive and thus improve the general ensemble. This does not necessarily imply that the physician should act as beautician or coutourier. He need only suggest that the patient consult the people who make a business of these things. Often a change in the style of hair dress or make-up will



Fig. 6.

work wonders. In the end it not only helps the patient mentally but also provides a better setting for the reconstructed nose. I have seen many number of shy, self-conscious patients develop a bright self-assured attitude that reflected itself in their every move. To achieve such a result is certainly sufficient justification for the operation.

Obviously this form of treatment is tiring; it requires a large amount of time and patience and involves considerable tact and judgment. However, the effort is ultimately worthwhile because it makes the patient appreciate the work that has been done and restores him to his proper place in his environment. The only patients in whom this will fail are the few who are truly psychopathic individuals. Only by knowing the background of these patients through conversations with the indi-

vidual or his relatives or friends can one avoid unpleasant aftermaths; only by having the insight to diagnose this condition before an operation is undertaken can one avoid the pitfalls of an operation which will not only fail to satisfy the patient but bring grief to the surgeon.

The attainment of happiness is one of life's major goals, whether the complaint be mental, physical or spiritual and we as physicians are constantly besieged by patients for relief. When this can be administered without risk, it is surely our duty to do so. We need the ability adequately to appraise a given situation and to keep well within the bounds of probabilities in mapping out a course of procedure. Conservatism is by far the best guide in these cases and when coupled with sympathy and tolerance will yield a high percentage of good results.

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MANAGEMENT OF LYMPHEDEMA*

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Lymphedema in its various stages is far from a rare disease; in fact, every practitioner of medicine and surgery will frequently be approached by patients seeking relief especially from large and unsightly legs. These complaints are magnified in those patients who have tremendous stasis, and the truly huge extremities which follow a more complete blockage of lymphatic systems. On occasions the extremity becomes so large as to incapacitate the patient completely, making walking almost, if not completely, an impossibility. On the other hand, one of the greatest and most unfortunate complications of surgery is the tremendous lymphedema which follows amputation of the breast for cancer.

All these patients deserve help, even if the edema is comparatively mild, because it may progress to the more severe stages which are amenable only to the more complicated forms of treatment. The largest percentage of patients will be women for they are more seriously affected by the cosmetic embarrassment. The problem of caring for these patients devolves itself into, first, seeking for an etiologic factor, if this is possible; second, correcting the etiology, again if possible; and third, attempting to improve the lymphatic circulation to such an extent that the patient is able to carry on.

Many difficulties beset our treatment. Often no etiology whatsoever can be found and our knowledge of the physiologic relationship between



Fig. 7.

*Presented by Dr. John T. Reynolds of Chicago at the Ninetieth Annual Session, Iowa State Medical Society, Davenport, May 14, 15 and 16, 1941.

the arteriovenous and lymphatic circulation is very limited. Splendid researches by such men as Drinker and Fields and a host of others have added considerably to our knowledge of the osmotic relationships between these circulations. Nevertheless, we have only scratched the surface in the knowledge of the lymphatic circulation. Studies of the arteries with their pulsating vessels have been successful in demonstrating the various types of the disease, as have the studies of the veins both anatomically and physiologically, but the lymphatic circulation is of such fine and intricate nature that we possess only a general idea of its workings. This accounts for the fact that a large number of patients with lymphedema will be classed as idiopathic and no cause will be found. We can only say that the lymphatic circulation is apparently deficient and that there is a resulting stasis of tissue fluids. It is for these patients especially that a tremendous number of therapeutic procedures have been suggested which is an adequate testimonial that none of them is very successful.

Our first problem when we see a patient with lymphedema or elephantiasis is discovering the cause. This implies a careful history. The family history may be exceedingly important because there are definite familial traits in a certain group (Milroy's disease). The history of life spent in climates where there is much parasitic disease may suggest filariasis. The history of trauma may suggest either scar, thrombophlebitis, or even arteriovenous communication. Surgical intervention may have been followed by thrombophlebitis or scars may contract lymphatic vessels in veins. When discussing surgical intervention, it is important to remember that recurrence of the disease process may cause the lymphatic block, so often seen in recurrence of the cancer of the uterine cervix or breast. The history of variations in the digestive habits may disclose pertinent information; we occasionally see nutritional edemas in vegetarians and other food faddists. Changes in the bowel habits may suggest tumors of the intestinal tract. The urinary history is exceedingly important; we have observed that the first sign of an impending uremia may be a peripheral edema. We have also observed a unilateral edema with an ectopic kidney which presented definite urinary complaints. The cardiovascular history may be significant, because edema of the lower extremity may appear with impending heart failure. A careful history into the endocrine reactions may suggest myxedema, etc. Allergies should also be investigated because angioneurotic edema may come into consideration.

The physical examination should be a complete

one with careful examination of the heart, the size of the liver and the presence of any factor which might conceivably be concerned. In examining the swollen extremity, one should carefully observe the character of the swelling to make sure that it is due to fluid and not to fat. The lymph glands, not only at the root of the extremity involved, but in all of the extremities, should be carefully evaluated. Search should be made for evidences of ring worm and other skin infections, and especially for signs of inflammatory disease in the lymphatic vessels themselves.

The laboratory should be called for careful examination of the blood and urine. We feel it is important to do a blood sedimentation rate in every patient. This is a simple test and will give definite evidences of the presence of any infectious or neoplastic process even if the patient has neither leukocytosis nor fever. The examination of the rectum and bimanual examination of the pelvis should never be omitted, and in many cases an investigation of the albumin-globin ratio of the blood will be valuable. X-ray studies of the urinary and gastro-intestinal tracts may give valuable clues.

We realize that in lymphedema there is some form of occlusion of the lymphatic vessels which may be of congenital origin or may be due to pressure, inflammation or thrombosis, and we will in the above manner be able to exclude or classify the types of lymphedema. We agree with Pratt and Wright that a classification of lymphedema should be carried out from the standpoint of treatment, and feel that such a classification will be completely adequate from all of the other viewpoints. It is almost impossible to consider a classification from the standpoint of etiology alone, since we know that whatever the cause of the original lymphatic block, a vicious cycle is soon set up through fibrosis of the tissues themselves. This is enhanced by the fact that the lymph-soaked tissues are so tremendously rich in protein that fibrosis takes place in a perfect culture medium.

The treatment of the patient depends, as we have suggested, upon the degree of the edema and upon its cause. If there is a history of recurrent lymphangitis or recurrent thrombophlebitis, we usually embark upon local therapy until these have been cared for. All foci of infection are eradicated and the patient is carried through a course of sulfathiazole in conjunction with mild doses of x-ray therapy over the affected area. The x-ray should usually be limited, as de Takats has shown, to very small doses, approximately one hundred rat units at a time. We have also used convalescent streptococcus serum with some success. It should be remembered that the lymphangitis may take

the form of a recurrent erysipelas and this may be treated in the same way. One of the most important factors in our opinion is clearing the patient of every trace of ring worm of the feet. Unquestionably a large percentage of the infections which beset the lymphatic system gain entrance through the macerated surfaces between the toes. We do not feel that any treatment of the edema should be attempted until the dermatologist has secured complete control of this situation. During the acute stages we believe that a great amount of fluid can be removed from the extremity by the active use of diuretics, including ammonium chloride and the various mercurials which de Takats has recommended in the treatment of thrombophlebitic edema.

In cases where a growth is pressing upon the lymphatic vessels, as a large ovarian cyst, or where there is a traumatic or operative scar obstructing the root of the extremity, the growth should be resected and replaced by a skin graft of the full-thickness pedicle variety. In the x-ray or radium burns a similar procedure should be followed, and very frequently in these cases tremendous skin grafts will be required. In cases of congenital lymphatic tumors, such as hygroma, local surgery is also advisable. I want to make another plea for the diligent search for metastasis. On several occasions I have even found small nodules in the skin which on biopsy revealed the invasion of a malignancy which was otherwise unexpected. For this reason we have found it wise to explore the glandular area in almost all cases of lymphatic obstruction where there was any question of origin, and to biopsy the glands. It is remarkable how often we have discovered malignant invasion.

The truly idiopathic case and old long-standing thrombophlebitic edema will be treated according to the degree of swelling. If they are mild, as unquestionably most of them are, the simple forms of treatment, medication and diet, are advisable. Ammonium chloride in large amounts is often beneficial if it is tolerated, and the judicious use of other diuretics may be helpful. The patient is placed upon a high-protein low-salt diet which is usually well tolerated. Postural drainage may produce remarkable results and the simple expedient of having the patient sleep with the foot of the bed elevated six inches will often afford complete relief in the mild case. The use of massage in mild cases is sometimes beneficial, although it should be started with great care in order to avoid stirring up a latent phlebitis or lymphangitis. The massage should be of a stroking type only, toward the root of the extremity. The use of bandages and elastic stockings and gloves is, of course, the backbone of the treatment of the mild case. At

first they should be worn constantly; later the patient may need to wear the bandage only part of the day.

The use of the Pavex boot is, in our clinic, absolutely contraindicated. We have seen marked aggravation of cases from its use. On the other hand, the use of the intermittent venous compression cuff, with the pressure at the cuff limited to forty milligrams of mercury, has sometimes been very beneficial. This is most difficult to explain, but we advise that it be used with extreme caution.

In the moderately advanced cases where the edema is not fixed, we implant strips of celloidin in the same way that Handley employed silk threads. Celloidin, which is a purified cellulose acetate compound, has a most peculiar reaction in the tissues. It is not surrounded by a foreign body reaction but is rather surrounded by a single layer of mesothelial cells which have the microscopic appearance of a blood vessel. These strips of celloidin are pushed into the tissues with a long eight-inch forceps from the normal into the edematous area. They are left in place from four to six weeks, and then removed. Strips of about ten inches in length, four to six for each extremity, are employed, and the entire incision for the procedure is only about one-half inch long. When the strip is removed one will observe a tract which has the general appearance of a tendon sheath. The tract is full of thin lymph which apparently drains through this area even after the removal of the celloidin strips. We have used this method in ten cases of lymphedema of the lower extremities with marked improvement in six. We have found it especially applicable to lymphedema which follows breast amputation, in which case four strips are implanted from the edematous tissue of the arm into the normal tissue of the chest wall. One must avoid pushing through the cephalic vein. We have used this in five cases with some benefit in all of them, and spectacular changes in three. Before the celloidin is implanted, the patient's arm should be suspended on an aeroplane splint for a matter of two weeks to facilitate the introduction of the strip.

In the more advanced cases, the method of implanting celloidin strips will not suffice, and extensive resections of skin and subcutaneous tissues including the fascial muscular sheaths must be carried out. There are many variations of the original procedure suggested by Kondoleon. Most of these vary in the amount of subcutaneous tissue and skin which is removed. Some authors remove the entire subcutaneous tissues including the fascia of the whole circumference of the leg, and replace these with skin grafts. Macey of the Mayo Clinic

has found that split-thickness grafts will be nourished if they are placed directly upon the muscle and the subcutaneous tissue temporarily replaced over them. Thus, in two stages he removes the entire integument of the extremity and replaces it with thin grafts upon the muscle. The operative procedure which we usually carry out is similar to the one suggested by Pratt and Wright in which an extensive resection of the subcutaneous tissue and fascia is carried out over three-fourths of the circumference of the extremity, utilizing, however, the original skin for a large part of the repair. It must be remembered that this is a very shocking procedure. We keep the patient in bed with the foot of the bed elevated for at least two weeks before the operation. A high blood sulfanilamide level is built up at this time as a prophylactic measure. Blood is prepared for transfusion, and the operation is carried out in stages if the extremity is tremendous. We feel it is perfectly safe to complete this procedure in multiple stages, taking four to five sessions for the entire leg.

In conclusion, we wish to point out that lymphedema is not a single disease entity with a single etiology: that even the mild cases require extensive studies and a diligent search for a cause which can be corrected by a local surgical procedure; that if no cause is found, a variety of therapeutic methods are possible which will fit according to the gravity of the disease. We furthermore submit an operative method, the implantation of a strip of celloidin for those intermediate cases which are too severe for response to the conservative methods, and yet not severe enough to warrant the more radical operative intervention. The application of this method to lymphedema from breast amputation has been indicated.

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GASTRIC AND DUODENAL HEMORRHAGE*

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During the last four or five years there has been a relatively large amount of medical literature on the subject of gastric and duodenal hemorrhage. In this literature nearly all our old orthodox conceptions, especially in regard to the treatment, have been unfavorably criticized. Gross changes have been recommended in the time of administering food to these patients, and also in the quantity and quality of food given. The old time-honored ice cap has been discarded from the epigastrium. Elevation of the foot of the bed has

been eliminated or reversed. The use of hemostatic serums (thromboplastin, etc.) has been discarded. Even the use of morphine has been questioned. Extreme views for and against blood transfusion are held, and while the profession as a whole is generally in accord on the surgical indications for peptic ulcer, confusion seems to have increased on the question as to when surgery should be applied to the hemorrhaging case.

Severe gastric hemorrhage is often a real catastrophe. It is alarming to the family and friends, as well as to the patient himself. Neither is the doctor who is called to attend the case at ease until the patient is well on the road to recovery. He knows that about one out of ten such patients will not recover, but he does not know, and has no way of finding out just which case that will be. If the patient is a young person, the anxiety is less for we know that while the hemorrhage may be better than older people, and therefore, do not so often lose their lives in gastric hemorrhage. The death rate has been quoted by a number of authorities at one per cent or slightly more in patients under forty-five years of age. While I have seen several deaths from gastric hemorrhage only one was of a patient under forty years of age. If the patient's age is fifty years the physician's concern is greater and increases with the advancing age of the patient. High grade arteriosclerosis and hypertension are potent factors increasing the mortality rate as also are the chronic and constitutional diseases so commonly associated with the later years of life.

It has been argued by many that repeated hemorrhages, even with considerable time between attacks, are eventually likely to prove fatal. This is disputed by Stone¹. He quotes statistics to prove that it is the first severe hemorrhage that causes most of the deaths, (60 to 75 per cent): in particular the hemorrhage which is repeated one or more times in the first few days of the attack is usually fatal. This opinion is in accord with my personal experience. I have one patient who has had twelve severe hemorrhages. He is still hale and hearty at sixty-two years of age.

An accurate diagnosis at the immediate time of the hemorrhage is often impossible. The patient may be too sick to stand the wear and tear of detailed interrogation. Even a rigid physical examination may do more harm than good. X-ray and gastric analytical work obviously are contraindicated. In accordance with the prevailing opinion, we seldom x-ray a gastric hemorrhage case until three or four weeks have elapsed from the time of the hemorrhage. I have seen one case of recurrent hemorrhage with fatal issue following an

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x-ray examination which was done four days after the initial hemorrhage. With these cases it is usually quite clear that a hemorrhage has occurred. In hematemesis it may occasionally be necessary to make a detailed examination of the throat and nose or to examine the chest carefully to exclude the vomiting of swallowed blood. If the hemorrhage is from the bowel alone, bleeding from below the duodenum must also be considered. If there is doubt from the patient's description of the black and tarry stool, confirmation may be had by the character of the material clinging to the finger after rectal examination; or inspection of the interior of the rectum by a low proctoscopic examination can do no harm. If the patient is not too ill a small enema may be given and the results examined. Clotted blood in the stool or rectum usually means bleeding from the colon or below, while blood altered by digestion may come from lesions in the small bowel or a bleeding Meckel's diverticulum, as well as from the stomach and duodenum. Bleeding from esophageal varicosities may occasionally occur early in hepatic cirrhosis but usually it is a late manifestation and associated with other well-defined characteristics of the disease. The same applies to gastro-intestinal hemorrhages due to blood dyscrasias, and hemorrhagic diatheses of other sources. Hemorrhages originating from the stomach or duodenum itself are most frequently of peptic ulcer origin (about 85 per cent). A cancer of the stomach may occasionally erode a large blood vessel and bleed profusely. However, bleeding from a cancer is more likely to be a slow oozing. Massive bleeding from cancer is said to account for less than five per cent of hematemesis and melena. Severe hemorrhage is known not infrequently to occur from chronic gastritis, usually with the hypertrophic type, possibly representing nine per cent of the cases. Severe bleeding may occur from mucosal fissures and erosions associated with, or independent of gastritis. Polyps and benign tumors occasionally bleed profusely but they represent only a small minority (one per cent?) of cases.

In certain cases a fairly accurate idea of the cause of the hemorrhage may be obtained from the previous history alone. Many are chronic and have had recent x-ray examinations. Such inquiry is worthwhile. Recently certain physicians have recommended gastroscopy at the immediate time of the hemorrhage and have reported favorable diagnostic findings without any appreciable danger to the patient. We prefer to wait for more convincing evidence that no harm can come from such a procedure.

When I was a student, we were taught always

to regard hematemesis and melena as of peptic ulcer origin and treat it accordingly until such time as the diagnosis could be proved. The ulcer treatment we were taught is not a bad treatment for any gastric hemorrhage, whatever the cause. They all represent breaks in the mucosa, which probably respond as well to the ulcer management as to any other treatment. This dictum, I believe, is equally sound today.

Physiologically, it has been shown that ice to the epigastrum increases peristalsis and promotes congestion. This is contrary to the desired effect and is more likely to promote rather than retard hemorrhage. Therefore the ice cap has been discarded. Finsterer⁹ believes morphine inhibits cellular activity and promotes anoxemia, thus endangering the tissue. He prefers some other type of sedation if possible. Hurst rarely uses transfusion and then in small doses. Marriott and Kekwick² use it by the gallon in a continuous drip. Some physicians believe edema to the brain is produced by elevating the foot of the bed and is more harmful to the patient than the assumed benefit from increased blood supply.

However, it was Meulengracht³ of Copenhagen who completely upset the apple cart in 1935 when he reported the results of his new method. By this method he introduced the concept of liberal and varied feedings begun immediately after or even during the bleeding. He insisted that it did not hinder, but on the contrary helped clot formation. He believes it brings about a rapid convalescence, prevents nutritional loss and reduces the mortality. He treated 251 cases of gastric and duodenal hemorrhage with a mortality rate of 1.5 per cent. In a recent article⁴ he reports 491 cases with about the same mortality rate. Christiansen⁵ in the same city, had a mortality rate of 7.9 per cent on the starvation plan. The Meulengracht diet consists of scraped meat, milk, cereals, creamed or sieved vegetables, bread, butter, tea, cocoa, cream cheese, eggs, cooked fruit, fish balls, broiled chops, mashed potatoes, tapioca, etc. Medication consists of soda bicarbonate and magnesium carbonate, equal parts of each, and iron given three times a day. The feedings are given five times a day, at six, nine, one, three and six o'clock. The main meal is at 1:00 p. m. and the patient is allowed to eat as much as he desires.

Meulengracht's work has been lauded as well as criticized in English and American literature. It is pointed out that statistics on gastric hemorrhage are unreliable. Crohn⁶ shows a variation from 2.5 to 58 per cent in statistics on mortality due to hemorrhage. A severe gastric hemorrhage has not been well defined. Certain doctors were

unable to use the Meulengracht method consistently because of protracted vomiting in severe cases. Others who have used it are unable to secure the same low mortality rates. The idea is not entirely new. Lenhart years ago recommended feeding eggs and cereals immediately after the hemorrhage. However, in medical literature most comments have been favorable and due credit must be given to Meulengracht for putting the plan into successful practice.

Woldman⁷ has used the aluminum hydroxide drip method of neutralization extensively in the treatment of gastric hemorrhage and has reported a low mortality rate. This method has been largely advertised through the drug houses selling creamolin and amphotol. A nasal tube of special construction is placed in position and allowed to extend into the stomach. It is connected with a special apparatus for controlling the flow of creamolin into the stomach. By this scheme it is possible to control the acid secretion of the stomach day and night and at the same time feed the patient, since the nasal tube does not interfere with the swallowing of food. This procedure seems rational from the standpoint of acid control. Andresen⁸ has treated hemorrhages with a mixture of jello, cereal gruel and sugar, immediately after the hemorrhages at intervals of one and one-half hours, continued through the night. He has reported very satisfactory results.

All of these methods, in my opinion, have certain favorable features. I am convinced that Meulengracht is right in instituting feedings immediately, or soon after hemorrhage. In treating severe gastric hemorrhage we have consistently noticed increasing restlessness, a sort of mental anxiety, occurring on the third to the fifth day of starvation which is difficult to describe. It often marks the onset of a catastrophe. We have also feared the time when feedings are begun, and our fears have occasionally been justified by a repetition of the hemorrhage at that time. It is possible that the gastric cells, when first stimulated by food following a few days' rest, pour out a gastric juice unusually strong in its digestive principles. Patients who are fed early after a hemorrhage are certainly much more comfortable, because they avoid the torture of excessive hunger and thirst.

While I am convinced that Meulengracht is right in eliminating the starvation period I am not convinced that his procedure is an accurate method for treating peptic ulcer, whether it is bleeding or not. The routine of five feedings per day with three or four doses of alkaline powders is not unlike the hyperchlorhydria management of many years ago. This proved inadequate, and its

inadequacy necessitated the introduction of the more complete neutralization method in the treatment of ulcer. Meulengracht has reported perforations among his cases as well as repeated hemorrhage.

Personally, I prefer a management in hemorrhage of the stomach which controls the acid secretion, as is generally used in the regular treatment of ulcer. The acid secretion of the stomach has long been recognized as an important factor in the cause and perpetuation of ulcer. The earlier doctors believed this to be true because peptic ulcer occurred only in that part of the digestive canal which came in direct contact with unneutralized gastric secretion, and the symptoms were abated on neutralization. More recently such authorities as Mann of Rochester and Palmer of Chicago have expressed doubt if a chronic ulcer ever exists in a true achylia. Ulcers may occasionally occur in a Meckel's diverticulum and also high in the esophagus, but when they do they are always associated with aberrant rests of gastric tissue and its acid secretion, so this exception would seem to prove the rule. Mann as well as Dragstedt of Chicago, in experimental work on dogs, has apparently proved a close relationship between peptic ulcer and the acid secretion of the stomach.

We were not satisfied with the results of the old treatment in these cases, and after studying the reports as mentioned above, we decided to make a change in our management. Our object was to combine the favorable factors of the Meulengracht and Sippy treatments and the aluminum hydroxide drip of Woldman. We eliminated the starvation period, which we believe is the important principle in Meulengracht's method, by instituting the regular neutralization plan of feeding and treatment immediately or soon after the hemorrhage. In cases where there is no obstruction, the additional feedings have been immediately added and in sufficient quantity to nourish the patient adequately. Following the work of Woldman we introduced the nasal tube and continued the creamolin drip through the night. However, this method of administering the creamolin did not seem practical. The first patient thus treated developed an acute parotitis. The second two had difficulty in retaining the nasal tube. Amphotol or creamolin administered by mouth at one or two hour intervals during the night should accomplish the same purpose. In cases of protracted vomiting we believe that a suction tube of the Wangenstein type should be introduced through the nose into the stomach, and the stomach washed clear of its contents. The tube can be allowed to remain for many hours if necessary and the feedings can be started with the tube

intact. If there is any tendency toward regurgitation, vomiting or over-filling the stomach, the stomach should be immediately washed out by means of the Wangensteen tube. Sopher of St. Louis has been an advocate of a similar procedure in hemorrhage for many years.

Since March, 1939, we have been using the management as I have incompletely outlined, in the treatment of gastric hemorrhages. During that time we have treated thirty-four cases of hemorrhage, all of which were severe enough to require hospital management. All patients have recovered. The comfort of the patient has been a marked improvement in contrast with that of starvation. All of these were believed to be of peptic ulcer origin save two. One of these two was a definite hepatic cirrhosis, and the other had a severe myocarditis with hypertension and decompensation. Her hemorrhage was probably from a secondary gastritis. It is a notable fact that six of these patients had had previous gastroenterostomies. The bleeding was thought to come from a marginal ulcer in each case because they had not bled previously and there were other indications pointing to marginal ulcer.

I am frank to say that I do not know the exact indications for surgical intervention in these cases of hemorrhage. It is generally agreed that the patient under forty-five years of age should seldom be submitted to operative procedure for the immediate control of the hemorrhage. Older patients, as mentioned above, especially older men with hypertension, are often a real problem. If a patient bleeds to death on a conservative management, it is regrettable and one wonders if his life could have been spared by an early operation. Finsterer⁹ has had wide experience in the surgical treatment of severe hemorrhage. He has been able to reduce his mortality rate to five per cent in those patients operated upon within forty-eight hours of the initial hemorrhage, but the mortality rate in those operated upon later is very high, 30 per cent or more. He advocates early operation in all severe hemorrhages. If an operation is to be done, there is very little argument against making it an early procedure. Dr. Fay of Des Moines has said that no good can come from an operation upon the dying patient. A late operation in these cases is often just that. Unfortunately, some hemorrhages may be so severe that the patient will immediately bleed to death before any kind of treatment can be initiated. If surgery is to be recommended the diagnosis must be fairly certain. As I have indicated, the medical treatment of ulcer applies fairly well to any gastric hemorrhage, but this is not true with the surgical treatment. For instance, the finding of a bleeding gastritis

after exploring the stomach would be embarrassing to the surgeon and of little service to the patient.

In the final analysis, the indications for surgery are certain to depend somewhat on the results of conservative treatment. Thirty-four cases without a single death is a fairly good showing, but too small a number from which to make any positive conclusion. I know of no set rule to follow in recommending surgery, and would have to rely on the many component factors of the individual case.

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DRUG THERAPY IN NEUROPSYCHIATRIC CASES: CONTRAINDICATIONS AND COMPLICATIONS*

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In the treatment of nervous and mental diseases, as in the treatment of other disorders, considerable advance has been made in the past few years in the use of drugs, old and new. Since *indications* and rational procedures are to be obtained from many sources, in this communication only the *contraindications*, danger signals and possible untoward effects will be touched upon. It is hoped that this approach will not create an impression of pharmaco-nihilism but will suffice to review the topics and refresh our minds about the subject matter. We will, by no means, discuss all of the medicines used in the practice of neuro-psychiatry: many such as heparin in the treatment of cerebral thromboses are still in the experimental stage and are being used only by research workers who are well aware of the vagaries and inherent dangers of the chemicals. Drugs such as sulfanilamide and sulfapyridine, although used in neuropsychiatric practice (brain abscess, meningitis), will not be included since they are the chief concern of the internist and are fully reported by him. Space will be devoted to only those pharma-

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ceuticals which are in frequent or moderately common use.

MORPHINE

When Putman¹ says, "The use of opiates dates back to prehistoric days and no real substitute for it has ever been found", he is referring to the treatment of neuralgia and leaves it to others to indicate when the use of morphine is ill-advised. In his discussion of craniocerebral injuries Munro² warns, "These patients have, as a result of their injuries, an actual or potential depression of their respiratory centers", and continues dogmatically, "Do not use morphine if increased intracranial pressure is present or suspected. There are no permissible exceptions to this rule. Disregard of it will and has killed patients who would have otherwise lived" because "morphine is a respiratory depressant."³ The first warnings about the use of morphine to control the restlessness and fear in delirium tremens were probably due largely to the earlier notion that the essential pathology was cerebral edema with concomitant increased intracranial pressure. Although Cobb⁴ and others feel "The theory that the [delirium tremens] patient . . . may have cerebral edema . . . has . . . been thrown in the discard", it is still generally accepted as an empirical fact that the alcoholic patient tolerates morphine poorly. In 1936, Cline and Coleman⁵ wrote, "Paraldehyde is the most widely recommended [sedative] drug . . ." and "morphine . . . is distinctly contraindicated." This idea permeates the literature and was re-emphasized in 1939 by Bowman and his associates,⁶ who proclaimed, "Give sedative medication judiciously, paraldehyde being preferred and morphine condemned."

Morphine, Munro² thinks, may play a part in the causation of craniocerebral injuries of the newborn by asphyxiation of the baby if the drug is given to the mother during labor. He adds that control of convulsions due to craniocerebral injuries in the newborn by "Morphine in any form is absolutely contraindicated." Since increase in the intracranial pressure with associated depression of the vital medullary centers is the rule in an expanding lesion in the cranial vault, morphine is of especial danger in suspected or diagnosed brain tumors; neither should it be used in other conditions such as encephalitis and uremia in which the cerebrospinal fluid is thought to be, or proved to be, under increased pressure.

BROMIDES

Between July 1, 1935, and January 1, 1937, almost 600 patients were admitted to The Iowa State Psychopathic Hospital with both psychotic and non-psychotic disorders. Routine admission

tests showed bromide in significant quantity in the blood of 64, or approximately ten per cent of these. Four per cent of the 600 showed a blood bromide level of at least 150 milligrams per cent, the level at which marked toxic symptoms, including psychotic manifestations of bromide intoxication (bromism), usually appear. This finding conforms to those of Wagner and Bunbury,⁷ who discovered that 7.7 per cent of 1,000 consecutive admissions to the Colorado Psychopathic Hospital "showed appreciable amounts of bromide in the blood" and that in 4.4 per cent "the mental symptoms were due to or increased by the bromides." The toxic symptoms of delirium with confusion, disorientation, both auditory and bizarre visual hallucinations, memory impairment and, perhaps, delusions as the result of bromide intoxication usually follow a prodromal period of restlessness, sleeplessness and mild confusion but their etiology may go unrecognized unless the prodromes be heeded. Curran,⁸ Gundry⁹ and others have adequately discussed the syndrome. In some of their cases the drug had been taken in patent remedies, in others the patients had unwisely refilled prescriptions given them by their doctors, and in some, repeated prescriptions had been issued. It is impossible to set forth definite rules on how much bromide can be given safely over a certain period for there is an individual sensitivity to the toxic effects from prolonged ingestion of moderate doses or after the ingestion of excessive doses. Gundry⁹ describes one case of bromism coming on after the patient had taken "several bottles [of bromide preparation] in a few days" and yet other cases developed only after "several doses of bromo-seltzer daily for at least ten years" or "uncertain doses for one year". The most that can be said is that bromides should never be given except under the close scrutiny of a physician who is prepared to make blood bromide determinations at frequent intervals. Because of the increased permeability of the blood-cerebro-spinal fluid barrier^{10 and 11} in senility, cerebral arteriosclerosis, general paresis and probably other neurovascular conditions, bromide medication is contraindicated in such conditions. As a result of dehydration and low sodium chloride intake, the alcoholic individual and patients with debilitation or impaired excretory systems are poor risks for bromide sedation. Like morphine, the bromides are respiratory depressants, although not to the same degree, and their use may be open to question in any patient with suspected or definite increased intracranial pressure.

BENZEDRINE SULFATE

In the past five years benzedrine has become an important part of the neuropsychiatrist's pharma-

ceutical armamentarium and has been widely used either experimentally or therapeutically in virtually all of the psychiatric disorders and in many of the neurologic syndromes. The principal indications for therapeutic use include chronic exhaustion, depressive states, neurasthenia, parkinsonism, narcolepsy, cataplexy, behavior problems in children and alcohol addiction. In 1935, Prinzmetal and Bloomberg¹² listed among the untoward symptoms, insomnia, hyperexcitability, marked restlessness and inability to relax, but found that these disappeared if the therapeutic dose was diminished. The following year Myerson, Loman and Dameshek¹³ described polycythemia with a red blood cell count from one to three million above the normal and with a doubled or tripled white blood cell count. Myerson and Ritvo¹⁴ mentioned additional toxic symptoms: chilly sensations, flushing, diarrhea, malaise and more severe reactions with collapse. They found such effects in two per cent of their patients. Wilbur, McLean and Allen¹⁵ list apprehension, anxiety, excessive sweating, dryness of the mouth, light-headedness, anorexia, loss of weight, irritability and even melancholia. They have also seen expenditure of energy beyond the patient's inherent capacity and such cardiac symptoms as dyspnea, retrosternal discomfort, precordial pain, and elevation of the blood pressure. They conclude, "The indiscriminate use of benzedrine cannot be too severely criticized. It is never advisable to substitute its use for careful search for the causes of the exhaustion and the correction of them if possible." Four contraindications are listed: first, in patients over sixty years of age; second, in the presence of hypertension; third, in case of cardiac disease; and fourth, in anyone not under the care of a physician. Reznikoff¹⁶ not only urges close supervision but insists that the physician shall have completed a "careful physical examination at the beginning of treatment". Less frequently seen are spasm of sphincters,¹⁷ abdominal cramps and increased desire to defecate,¹⁸ aplastic anemia,¹⁹ paranoid psychosis,²⁰ and in a case following a massive single over-dose (140 milligrams), hematuria, convulsion and coma.²¹ Davies¹⁹ warns against the danger of addiction, which is so likely to occur in alcoholism that Reifenstein and Davidoff²² advise, "The use of this drug in states of alcoholism with or without psychosis should be limited to institutionalized patients . . ."

INSULIN

The use of large doses of insulin in the treatment of schizophrenia, the manic-depressive psychoses, involitional melancholia and other neuro-psychiatric conditions demands a reconsideration

of its pathologic effects. Neither remissions nor recoveries in schizophrenic patients treated with insulin have come up to the earlier hopes and in some clinics the therapy is in disrepute. Since it is being used regularly in other places, mention is made here of its complications and contraindications. Cobb⁴ says, "The use of these measures [insulin and metrazol] in the treatment of *psychoses and neuroses from which recovery may take place** seems to me to be entirely unjustifiable." The administration of shock doses is dangerous because of possible ". . . cardiac collapse and pulmonary oedema . . ." or ". . . a state of coma from which recovery does not occur."²³ Neuropathologic sequelae of perhaps equal though more insidious danger are described by Weil, Liebert, and Heilbrunn,²⁴ who found degeneration and necrosis of cerebral ganglion cells in animals given doses of insulin comparable to those used for human beings. Cobb⁴ reviews the literature of animal experimentation and notes that ". . . extensive damage, usually accompanied by multiple areas of hemorrhage, may occur after both [insulin and metrazol] types of therapy; and in a certain number of patients dying from the treatments, comparable lesions have been observed. . . . There is some clinical evidence which suggests that damage of an irreversible nature occurs in the brain . . ." Freed and Wofford²⁵ strongly suspect that a subarachnoid hemorrhage in one of their patients was a direct result of hypoglycemic shock therapy. Mejia²⁶ has compiled a most extensive and discouraging list of serious sequelae; some of them, he believes, are due directly to the insulin therapy, while others seem to be only intercurrent. He found some type of complication in 80 per cent (!) of his treated cases. He discusses all the complications already mentioned and adds that gastric and intestinal disorders developed in 22 per cent of his cases, sometimes severe enough to necessitate interruption of the treatment. A beriberi syndrome developed in five per cent and pellagrous manifestations in four per cent. Activation of latent tuberculosis occurred in two patients. In 48 per cent epileptiform seizures were precipitated, severe enough in three instances to cause fractures. The most serious complications, resulting in the death of five patients (5.2 per cent), were bronchopneumonia, pulmonary abscess and gangrene. Aside from the broad contraindication given by Cobb,⁴ the most important would be the presence of any significant cardiovascular abnormality or bronchopulmonary lesions.

*Author's italics.

CONVULSANT DRUGS—METRAZOL

Certain undesirable sequelae to the use of metrazol have been mentioned in the discussion of insulin. In addition, Cobb⁴ says, "With metrazol therapy, pulmonary complications, particularly asphyxiation pneumonia, are the most frequent causes of death." Dynes²⁷ described cardiac irregularities resulting from metrazol injections, and Michael and Wittenbrook²⁸ warn, "Metrazol convulsions should never be induced in the presence of cardiovascular disease . . . an electrocardiogram should be a routine procedure before metrazol treatment." In 102 cases Goldstein, et al,²⁹ found three fractured humeri and observed subluxation of the temporomandibular joint so frequently that they expected it. Various other dislocations and fractures, including those of the vertebrae, have been reported in sufficient number to contraindicate metrazol treatment wherever there is defective calcium metabolism or pre-existing bone disease. Some workers recommend x-rays of the vertebral column before therapy is instituted.

However, when curare or beta-erythroidin hydrochloride is injected intravenously prior to the metrazol treatment the severity of the convulsion is so diminished that danger of fracture or dislocation is almost if not absolutely nil. Hence, complications due to metrazol are made fewer and contraindications decrease accordingly. Curare and beta-erythroidin hydrochloride may produce serious respiratory and circulatory embarrassment in sensitive individuals if injected too rapidly, but end results need not thereby be morbid if prostigmin is utilized as a specific antidote.

Untoward mental, as well as physical, symptoms may follow, such as Korsakoff's syndrome (Plattner³⁰) and elated euphoric states (Dynes²⁷). Dynes³¹ found violence and difficulty in nursing care with exaggeration of symptoms of memory failure, confusion and intellectual deterioration in 15 per cent of his 68 cases and believes that "*prolonged courses of treatment**" (20 convulsions or more) have . . . been quite unjustified . . .; improvement in those cases who do improve . . . was noted after one to four convulsions". Our own experience with metrazol and electro-shock therapy (to be reported in detail later) leads us to the tentative conclusion that although euphoria, memory disturbance, confusion and apparent intellectual deterioration frequently occur, they are only temporary phenomena and that they disappear spontaneously in a few days or weeks after treatment is discontinued. We tend to agree that if improvement from the original symptoms is to take place at all, it usually begins within the

course of the first few convulsions, but we have had infrequent cases in which improvement began only after the tenth convolution. "Other convulsants such as thujone and camphor, have been shown [by L. Opper] to cause lesions in the cerebral cortex . . .", and their contraindications are the same as those for insulin and metrazol.

BARBITURATES—SODIUM AMYTAL

It must be stressed again that this article does not propose to condemn the use of the drugs discussed but only to set forth their limitations and restrictions. The barbiturates, for example, could scarcely be dispensed with because, except for paraldehyde, they constitute the most effective and least dangerous of all the sedatives and hypnotics used in neuropsychiatry. Luminal must still be regarded as an important anti-convulsant, barbital is an inexpensive and efficient sedative, and in the experience of some, sodium amytal is the most potent remedy for the relief of agitation and depression and effects the most complete possible release from the inhibiting mechanisms in the mute schizophrenic or retarded depressed patient. If continued use is to be made of these valuable drugs it is important that the few contraindications and the possible complications be listed.

Broder³² found toxic manifestations after as little as thirteen grains of sodium amytal daily for an average of eleven days: convulsions, urinary retention, cyanosis, emesis, hiccup, dysphagia, headache and slurred speech. Lorenz, Reese and Washburne³³ warn, "Because of the great blood pressure instability among the involitional cases, greater caution and supervision must be used in them." Berrington³⁴ believes that sodium amytal is without danger if injected slowly and in fairly dilute preparation except in cases of ". . . marked hypertension or hypotension, generalized arteriosclerosis and gross pulmonary or cardiac disease . . ." To this list might be added alcoholic psychoses, marked senility, meningo-encephalitis syphilitica (general paralysis of the insane), and any patient who may have an increase in the permeability of the blood-cerebrospinal fluid barrier.^{10 and 11} Where the latter prevails, mental symptoms may be exaggerated or excitement may occur. The observation of Zerfas³⁵ that ". . . even hypnotic doses [of sodium amytal intravenously] may paralyze the respiratory center, if they are given too rapidly" lends weight to the argument for conservatism and precaution. In neurosurgical cases where elevation of the intracranial pressure is present or potential, according to Munro,² ". . . excessive use of the barbiturates tends to produce a toxic anoxemia which may . . . prove fatal." The author has seen one patient who developed a severe bullous erythema multiformi

*Author's italics.

on two occasions after the ingestion of only three grains of sodium amyral. The same patient is able to take luminal with impunity. The reaction appears to be due to a known predisposition to allergic phenomena.

On the whole, the same comments may be made for the entire group of barbiturates. There have been reports of granulocytopenia following the administration of therapeutic amounts of alurate,³⁶ of purpura hemorrhagica resulting from sedormid,³⁷ and of polyneuritis after evipan narcosis.³⁸

HYDANTOIN (DILANTIN)

Merritt and Putnam introduced hydantoin (sodium diphenyl hydantoinate) as a superior anti-convulsant and discussed the toxic symptoms. In 1938,³⁹ they mentioned minor reactions such as dizziness, ataxia, tremors, blurring of vision, diplopia and slight nausea in 15 per cent of their series but found the symptoms were relieved by decreasing the dose from the optimum (0.1 to 0.2 of a gram per day). They also reported minor dermatitis (erythematous, scarlatiniform or morbilliform) and occasional cases of a more serious exfoliative dermatitis. Purpura without blood change was also seen. They felt that the medication should be restricted to those ". . . who do not respond to the less toxic forms of therapy previously in common use". In 1940,⁴⁰ they again listed the toxic effects, adding a heavy feeling in the stomach, vomiting, nervousness, drowsiness, headaches, hypertrophy of the gums, increased libido, dermatitis associated with fever, leukocytosis, eosinophilia and increased growth of hair on the face, arms and torso of female patients.

ARSPHENAMINE, NEOARSPHENAMINE AND TRYPARSAMIDE

The organic arsenicals used in the treatment of neurosyphilis have therapeutic limitations as the result of their inherent toxic properties. The effects vary from "faintness, headache, flushing, giddiness, nausea, general malaise, profuse sweating, dyspnea, restlessness and tremor"³ to the more severe nitritoid reactions with rapid pulse, precordial pain, dyspnea and urticaria. Stomatitis and albuminuria may develop, as may severe dermatitis and acute yellow atrophy of the liver with jaundice. Less common are purpura hemorrhagica following the administration of neoarsphenamine⁴¹ and encephalitis hemorrhagica, the latter culminating in convulsions, coma and death. Weinberg⁴² reports three cases of "medical shock following intravenous therapy with neoarsphenamine" and Scott and Moore⁴³ say, "Exceptional individuals . . . will react to the drug more severely than others in whom a dose harmless to the average individual may set up dangerous or even fatal

complications." Tryparsamide is also known to have resulted in nitritoid reactions,⁴⁴ although they must be fairly rare since only nine cases have been found in the literature. Coon,⁴⁵ however, states that recently similar mild reactions are being seen more often. The toxic manifestation most to be feared from tryparsamide is optic atrophy. Amblyopia due to changes in the ganglion cells of the retina may also be produced.⁴⁶ The Herxheimer reaction, an inflammatory reaction in syphilitic tissue (skin, mucous membrane, nervous system or viscera), may be induced in certain patients by arsenicals or heavy metals and is thought to be due to irritation of the *Treponema pallidum* by an insufficient dose of the medication. Before tryparsamide therapy is introduced, optic neuritis or atrophy should be searched for by both ophthalmoscopic and visual field examinations and the drug should be discontinued immediately if visual disturbance occurs. Urinalyses prior to each injection will reveal the state of the renal function; discontinuation of the drug is indicated if nephritis develops. None of these drugs should be given in the presence of any liver disease without the greatest of precaution.

HEAVY METALS AND IODIDES

No drug used in the treatment of syphilis is free from danger, and the heavy metals, bismuth (including bismarsen and other forms) and mercury, are contraindicated in patients with evidence of renal damage. They may cause not only stomatitis⁴⁷ but severe necrotizing nephrosis after even one dose,⁴⁸ and fatalities have occurred. Beerman⁴⁹ lists sudden death from the accidental injection of the metal intravenously and delayed deaths ". . . due to bismuth intoxication usually attributable to involvement of the gastro-intestinal tract, the liver or kidneys or a combination of two or more of these structures". Iodides in comparatively small quantities, but more commonly after repeated administration, may result in iodism with or without fever.⁵⁰ Since they may break down the tuberculous nodule and liberate tubercle bacilli into the general circulation,³ they should not be used in the presence of tuberculosis.

ERGOTAMINE TARTRATE

The possible ill effects of ergotamine tartrate therapy for migraine have been thoroughly investigated by von Storch.⁵¹ He has seen no case of ergotism but believes that the rather frequent accessory symptoms of nausea, vomiting, numbness and tingling of the extremities, and muscle pains and stiffness constitute a warning when they are persistent or progressive and indicate the necessity for discontinuing the therapy, which may be resumed cautiously only if examination reveals

no evidence of impending ergotism (necrosis of the skin or neuropsychiatric symptoms such as confusion, coma and convulsions).

QUININE—PROSTIGMIN

Quinine, which is used not only as a specific for the discontinuance of malarial antiluetic therapy but also in the myotonias, may create tinnitus, gastric discomfort, diarrhea or skin eruptions with or without fever after the administration of comparatively small doses if there is an idiosyncracy for the drug. There have been some cases of quinine ingestion followed by fever and hemoglobinuria or albuminuria. Prostigmin is effectively employed as a diagnostic and therapeutic agent in myasthenia gravis. "If this dose [15 to 30 milligrams two to three times a day] is administered for too long a time or is increased, a 'curare-like' effect which results in weakness, paralysis and respiratory failure may occur."⁵² Prostigmin has been tried in the myotonias and occasionally has been found to exaggerate the symptoms.

NICOTINIC ACID

Several neuropsychiatric conditions other than pellagra are treated with nicotinic acid, either as a specific or as an adjunct to psychotherapy. Ruffin and Smith⁵³ found that daily doses of one gram caused ten medical students to experience flushing, mental depression, epigastric distress, substernal oppression, headache, nausea and vomiting. Sebrell and Butler⁵⁴ also produced "... transient unpleasant but harmless reactions ..." in four of six women treated with a daily dose of 50 milligrams and in two of six women treated with 30 milligrams daily. They add, however, that "Although the reactions are disagreeable, they persist only a short while and there is no evidence that any harm is done by them. Therefore their occurrence should not be allowed to interfere with the therapeutic use of large doses of nicotinic acid." Itching of the skin is sometimes associated with the flushing. The substitution of nicotinic amide for nicotinic acid is said to lessen the flushing.⁵⁵

ATROPINE—HYOSCINE—STRAMONIUM

The alkaloids atropine, hyoscine and stramonium, which in neuropsychiatry are used chiefly to diminish tremor, salivation and rigidity in parapysis agitans (Parkinson's disease), produce dryness of the skin, mouth and throat, thirst, flushing, hoarseness and difficulty in swallowing. "There is often nausea, and in some cases vomiting, headache and giddiness; the pupils are wider than usual and the sight may be indistinct, especially for near objects. The respiration may be quicker and the pulse often beats at the rate of

100 per minute or more. . . . Restlessness and garrulity point to an increase in the irritability of the brain."³ Confusion and mood lability may supervene if the dose is continued after the above mentioned prodromal symptoms appear. Even mania, delirium or convulsions may follow, and in extremely toxic doses patients have slipped into coma and died from asphyxia. It must be remembered that the action of the drugs is cumulative and that these complications may follow the prolonged use of moderate therapeutic doses.

GENERAL ANESTHETICS—NITROUS OXIDE, AVERTIN

Not only in the practice of neurosurgery but sometimes in the diagnosis, treatment and investigation of neurologic and psychiatric cases, especially for pneumo-encephalography, some type of complete narcosis is needed. The inherent dangers associated with the use of any anesthetic agent are well known, but there are added hazards where these agents are used in the presence of neuropathology. In his text on craniocerebral injuries, Munro² says, "The use of avertin is contraindicated . . ." (and nitrous oxide also) because of its ". . . asphyxial effects and resultant venous engorgement." He would seem to base his judgment on the presence or potential presence of increased intracranial pressure in so many neuropsychiatric cases; therefore, these anesthetics must be contraindicated in all those cases where there is proved or suspected increased spinal fluid pressure. His study of craniocerebral injuries of the newborn has led him to believe that ". . . the excessive administration of inhalation anesthetics to the mother during labor . . . suggest the possibility of an asphyxiated baby."

SUMMARY

The drugs which are most frequently used in the management of neurologic and psychiatric cases have certain inherent dangers. For neurologic or psychiatric patients they may have physiologic effects and hence complications and contraindications different from those seen in other therapeutic situations. Each drug is considered separately and the above factors are discussed.

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UNFAVORABLE REACTIONS TO ADMINISTRATION OF ANTISYPHILITIC DRUGS

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The administration of antisypililitic drugs to a patient on the basis of positive serology alone is not the goal of the medical profession. In other words, the routine administering of drugs because of a laboratory diagnosis is not "good medicine." That the person with a laboratory diagnosis must be regarded as a distinctive personality and treated as an individual, needs little comment. If a physician has lost familiarity with the interpretation of heart sounds, palpation of the abdomen, or with ophthalmoscopic examination, he must be prepared to get this information from a competent colleague. One cannot evaluate the results of antisypililitic therapy unless one knows what pathology was present at the time treatment was inaugurated. Most important is the necessity of knowing whether or not treatment in itself is likely to cause grave consequences because of pre-existing pathologic conditions.

The first and most important measure with regard to reactions is their prevention. This can be accomplished only by a thorough evaluation of the patient as an individual human being. A reaction might be defined in general as a response of the body to a stimulus. It might well be conceived that the degree of stimulation, the nature of the stimulus, the path of entry and the mode of

approach, would all have a definite bearing upon the effect or the degree of reaction. This is indeed true in the chemotherapy of syphilis.

The usual method of administering the arsenicals, that is, the intravenous route, is the most rapid, most effectual and most complete method of making the drug available to the tissues. When administering early treatment to a patient with recently acquired syphilis, one must bear in mind first, that the blood stream is suffused with treponema; second, that the treponema is powerful and insidious in its action; and third, that drastic action is imperative. Bearing these facts in mind, Ehrlich and those who followed him prepared a very powerful, semi-toxic drug and made it immediately accessible to the blood stream itself. With such a powerful agent working on the blood stream, reactions are, at times, certain to occur. In addition one can always expect a Jarisch-Herxheimer reaction of some degree, which is actually a sudden arousing or exacerbation of the pathologic processes caused by the organism. With this in mind the physician must know if this sudden exacerbation of the pathologic processes can be withstood. A sudden lighting up of a syphilitic laryngitis may easily cause death from strangulation as well as the noteworthy "therapeutic paradox" (the medicine cured him but the patient died) which results occasionally from the Herxheimer effect on syphilitic aoritis. Reactions may be classified as follows:

I. Preventable.

A. Those due to faulty technic.

1. The nitritoid crisis (angioneurotic symptom complex).
2. Extravenous injection of an arsenical.
3. Intravenous injection of a heavy metal.
4. Incompletely sterilized instruments or tubing.
5. Acid arsphenamine.
6. Stomatitis.

B. Those due to incomplete diagnosis.

1. Serious Herxheimer reaction.
2. Optic atrophy from tryparsamide.

II. Non-Preventable.

A. Arsphenamine Dermatitis (exfoliative dermatitis).

- B. The "ether odor" of the arsphenamines.

C. Gastro-intestinal reactions.

It is obvious that in the limited space of this article an attempt to discuss the above reactions with any degree of thoroughness would be impossible. It must suffice to name them and to discuss those of greatest import. When administering the first arsenical treatment to a patient with recently acquired syphilis, one must bear in mind that the body is already infected in its en-

tirety with the treponema and that syphilis is always a general infection, never local. As mentioned previously, it is to be expected that when a drug as powerful as arsenic is suddenly plunged into the blood stream, reactions will follow. Fortunately either the nitritoid reaction or the so-called Jarisch-Herxheimer reaction is usually transient and while the former is sometimes alarming, neither of the two is of serious consequence in early syphilis. The Herxheimer reaction may be a visible flare-up of a secondary eruption with a chill and fever of no great significance, or in late syphilis it may be an edema of the wall of a coronary artery with occlusion and sudden death.

The nitritoid crisis or angioneurotic symptom complex is characterized by the patient feeling hot, having palpitation and a sense of oppression. The first symptom is usually suffusion of the conjunctivae which should be watched throughout each first injection. If this appears, the treatment should be interrupted at once and the reaction will be mild. However, if the administration of the drug is continued, some or all of the following symptoms may appear: cutaneous flushing, choking cough, cramp-like lumbar pain, fall in blood pressure. More rarely edema of the face, tongue and glottis, or a generalized urticarial eruption may occur. There may be syncope, with thready, almost imperceptible pulse; the patient becomes alarmed with a sense of impending death and even the physician may be alarmed. Instances of death have been reported but they are very rare. Even if untreated, the reaction usually passes off in twenty to sixty minutes, leaving the patient no worse for his frightening experience. However, ten minimis of adrenalin 1:1000 will afford prompt relief. When the nitritoid reaction has once occurred there is reason to suspect that it may recur and all subsequent injections must be given very slowly, through a fine gauge needle, with diligent attention to the condition of the patient, who should be watched for flushing of the face or other significant signs. If this fails, the patient can be given 0.6 of a cubic centimeter of 1:1000 adrenalin intramuscularly five minutes before this injection. (Patients with hypertension or cardiovascular syphilis are excepted.) If adrenalin is contraindicated the nitritoid reaction may often be prevented by a change from arsphenamine to neoarsphenamine or from neoarsphenamine to silver arsphenamine. Nitritoid reactions have been placed under the heading of those caused by errors in technic. While this is not entirely true, we do know that when injections are given very rapidly, through large gauge needles, and when the arsenical is not completely dissolved, the incidence of this terrifying experience is much greater.

If any of the arsphenamines except sulfarsphenamine are injected into the tissue extravenously, rather than intravenously, there is immediately a sharp burning pain at the site of injection. This occurs most frequently during unsuccessful attempts at intravenous administration and the pain is accompanied by a small lump at this spot. If the injection is interrupted at once and only a drop or two has been injected, the patient will have a sore arm for a few days with no further trouble. If more than this amount is spilled the patient will develop edema, intense pain and loss of mobility of the arm. If sufficiently extensive, a central sloughing may occur, requiring months to heal; crippling deformities due to fibrous scars may ensue, requiring plastic operation. The best treatment of this accident is its prevention. If the injection is interrupted immediately at the first complaint of burning pain, serious trouble will be avoided, or if a lump appears it can often be "milked out" and bleeding from the needle puncture should be promoted by gentle pressure.

Inasmuch as intravenous medication is usually a fairly difficult procedure one seldom thinks of it as an accident. However, if in an attempt to give an intramuscular injection of heavy metal, a vein is punctured and the medication which was intended for the intramuscular tissues is injected into a vein, alarming consequences may result. This is an altogether too frequent experience and its avoidance should command the clinician's most diligent effort. The dangers to be encountered here are oil embolism manifested clinically by tightening of the chest, uncontrollable coughing and sometimes grave shock. If an artery is entered, there may result many small oil emboli in the arterioles, with severe local pain and a skin eruption which Moore compares to *cutis marmorata* or marbled skin. These accidents, like the perivenous injection of an arsenical, are best treated by prevention. In other words, after inserting the needle into the muscular tissues, one should never inject a heavy metal into the muscles without first pulling the plunger back and holding it for at least ten seconds. If blood appears, the needle should be withdrawn and a new site should be selected. Accidents due to incompletely sterilized instruments, needles or syringes are too obvious to merit discussion. Reactions due to rubber when arsphenamine is given are characterized by nausea, vomiting, diarrhea and headache. These symptoms disappear in a few hours but may be prevented by soaking the rubber tubing in a four per cent solution of sodium hydroxide for five or six hours. This should be followed by a thorough rinsing before the first sterilization.

The serious consequences of acid arsphenamine, namely an immediate sense of oppression, pain in the chest, intractable coughing, syncope, circulatory collapse and often death, always occur with such lightning rapidity that even if there were a specific treatment, it could hardly be used. However, if the patient does not die, he can be stimulated with adrenalin, external warmth and oxygen inhalations. We cannot stress too strongly the importance of being sure that old arsphenamine is not mistaken for neoarsphenamine. These drugs should never be kept in the same cabinet or even in the same room. A physician should preferably not give arsphenamine on the same day that neoarsphenamine is given. Any additional procedure to insure the one arsenical against being mistaken for the other should be used.

Stomatitis from bismuth is of importance only from the standpoint of appearance and usually will not develop if proper mouth hygiene is used.

Serious Herxheimer reactions, that is, laryngeal occlusion or rupture of an aneurysmal sac, are due mainly to the fact that an arsenical was used before the patient was examined, since either of the two conditions exacerbated by this reaction could easily have been found on examination and the initial treatment changed to a bismuth or mercury preparation.

In order to prevent complete optic atrophy which occasionally follows the administration of tryparsamide, it is necessary that the syphilologist and the ophthalmologist cooperate in every way. If the visual field has been examined by the eye specialist and pronounced normal, there need be no fear of blindness following the administration of the drug.

The garlic taste or ether odor during the intravenous administration of an arsenical can be prevented by having the patient chew a clove or a mint. In any event it is of no serious consequence.

Gastro-intestinal reactions, unless prolonged, are of no special importance. They may be partly or entirely psychic; they rapidly disappear and can often be prevented by giving the patient some candy or a teaspoon of simple syrup before the injection is started.

Arsenical dermatitis has not been given the attention it deserves in this article due to lack of space. It is an entity with which a great deal can be accomplished both by prophylactic and therapeutic approach. If early signs are recognized and the arsenical changed or discontinued, no serious late effects will ensue. If one is in doubt, one should obtain a dermatologic consultant rather than attempt to put out the fire by adding oil to it.

MYTHOLOGY AS SHOWN IN MEDICAL WORDS*

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The subject of this paper originally was Medical Eponyms, a short word denoting the name of a person given to a disease, an organ or some medical thing. The word may not seem as familiar as synonyms or antonyms, but it is formed in the same way. Onyma means name, and the prefix epi means upon; in other words a new meaning placed upon a man's name. Richard Bright means a certain man to us, but Bright's disease has an entirely new meaning superimposed upon Richard's name.

You may be curious to know how I composed this list of eponyms, which when completed formed thirty-six pages. Since some words and some diseases appeal to us more than others, the best way to avoid showing favoritism seemed to read down the columns of the medical dictionary and note each proper name which was encountered. If the man had any disease, method or treatment named after him, he was placed on my list, which, however, grew so long that many of the less well-known names had to be omitted. With a paper thirty-six pages long, it seemed best to divide it into sections, and tonight we will consider those names from mythology which are used in medicine.

Caput medusae is a medical term used to denote the enlarged veins radiating from the umbilicus, due to dilatation of the subcutaneous veins and is indicative of portal obstruction, especially cirrhosis of the liver, or tumor or abscess or anything that would obstruct the return circulation. The origin of the term, Head of the Medusa, arises from the Gorgon, Medusa, a terrible monster who laid waste the country. She had once been a maiden whose hair was her chief glory, but because she dared to vie with Minerva, Goddess of Wisdom, her ringlets were changed to hissing snakes. She became a monster of such frightful aspect that no living thing could behold her without being turned to stone. Around her cavern might be seen stony images of men and animals who had chanced to catch a glimpse of her and had petrified at the sight. Perseus, by means of the helmet of Hades which rendered the wearer invisible, the shield from Minerva, and the knife from Mercury, guided by the image reflected in Minerva's shield, cut off her head and stuffed it in his wallet, and so ended her miserable existence.

We will next consider the first cervical vertebra, the Atlas. Atlas was the God who bore

heavens upon his shoulders. He was the father of three classes of nymphs: the Pleiads, the Hyads and the Hesperids. The Hesperids, with their mother and a dragon, guarded the golden apples of the tree which had sprung up to grace the wedding of Jupiter and Juno, in the Garden of the Hesperides. Perseus after he had killed the Gorgon, Medusa, and put her snaky head in his wallet, flew by means of his winged sandals to the western limit of the earth to rest until morning. Here was the realm of Atlas, whose bulk surpassed that of all men. Atlas, remembering the ancient prophecy that a son of Jove would one day rob him of his golden apples, attempted to thrust the youth out. Whereupon Perseus, finding the giant too strong for him, held up the Gorgon's head before Atlas's gaze. Atlas with all his bulk was changed to stone. His beard and hair became forests, his arms and shoulders cliffs, his head a mountain peak, and his bones rocks. Thus the giant became a mountain upon whose shoulders rest the heavens with all its stars. Thus the first vertebra, bearing the head of the man, is suitably called the atlas.

The arachnoid membrane of the brain is a delicate web-like tissue between the dura mater and the pia mater. This sponge-like tissue holds the cerebrospinal fluid of the subarachnoid cavity. The word is derived from Arachne, a mortal who dared to come into competition with Minerva, Goddess of Wisdom, daughter of Jupiter. Arachne, a young maiden, had attained such skill in weaving and spinning and embroidery that her fame went abroad, and rashly she boasted that she could excel the divinities in heaven, even Minerva. The result was that a challenge was given and at the competition, Minerva wove the twelve heavenly gods and goddesses and their deeds of valor. Arachne filled her web with the failings and errors of the gods, such as Leda and the swan, Europa and the bull, etc. Minerva, indignant at such presumption, struck the web with her shuttle and rent it; then touching the forehead of Arachne she cried, "Live, guilty woman; and to preserve this lesson, hang, both you and your descendants, to all future times". She changed her into a spider, forever spinning the finest possible thread and forever hanging. Thus we have the name for the arachnoid membrane with its spidery web-like tissue.

Achilles was the son of Thetis, a sea-nymph so beautiful that even Jupiter was greatly attracted by her. Having learned of a prophecy that Thetis should bear a son who would be greater than his father, Jupiter desisted from his impulses for a love affair with her, and decreed that Thetis should be the wife of a mortal. Achilles was the son

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who resulted from this union of a goddess with a mortal. His mother, endeavoring to make him invulnerable, dipped him in the River Styx, and succeeded except for his ankle where she held him. Thus we have the tendo achillis.

We are told that Achilles was brave, impulsive, passionately devoted to his friends, implacable to his foes, a lover of war and a lover of home, ambitious, handsome, gleaming princely. Hero of the Trojan War, he was killed by an arrow in his heel where he had not been dipped. Thus the phrase, "The Heel of Achilles", meaning the one unprotected spot, the one vulnerable place.

Hermes was the son of Jupiter and Maia, a daughter of Atlas. He is also called Mercury in Latin, and was the messenger of the gods. On his ankles and low-brimmed hat are wings. As a messenger he bore a wand of wood or gold, twined with two snakes, and surmounted with wings, which possessed magical powers over sleeping, waking and dreams, carrying wealth and happiness. May I remind you that the staff of Aesculapius, the Patron Saint of Medicine, has only one snake, and this staff is also called a caduceus. Mercury was sometimes called quicksilver, a name still retained for the element mercury in chemistry.

Aphrodite, called Venus in the Latin language, Goddess of Love and beauty and feminine charm was the daughter of Jupiter. She was born from the foam of the sea, and many artists have thus depicted her. She had an embroidered girdle which made her irresistible to men. At the touch of her feet the herbage quivered into flower. The Hours and Graces surround her, twining garlands and weaving robes for her that reflected the colors and perfume of rose, lily, violet and hyacinth. The spring and all vernal breezes are hers. In her embroidered girdle "lurk love and desire and loving converse that steals the wits even of the wise", as one poet phrased it. She is mistress of feminine charm and beauty, the golden sweetly smiling Aphrodite, who rules the hearts of men. She lends to mortals seductive form and fascination, and even the plainest girl beloved by her swain, takes on allurement at the time. To a few her gifts are a blessing, but to many they are only destructive of peace of mind. She usually was attended by her son, the winged Cupid. Thus a combination of Hermes and Aphrodite gives us the medical word, hermaphrodite, half man and half woman. From her Latin name, Venus, we get mons veneris, the mount of Venus, and the term venereal diseases.

Hymen was a beautiful youth who attended Venus. He was the personification of the wedding feast and the leader of the nuptial chorus, and was always called to bless weddings by his

presence. From his name we get the origin of the feminine anatomy concerned in procreation, the membranous tissue guarding virginity until the consummation of marriage.

Luna was the Goddess of the Moon, from whence comes the title of os lunate, one of the eight little bones of the wrist, and so-called because it is moon shaped. Lunar caustic, silver nitrate, comes from coupling the heavenly bodies with metal, the moon being coupled with silver.

Sommus (Hypnos) was the God of Sleep and Morpheus the God of Dreams. These two with their brother Death were all the Sons of Night. From this source we get somnifacients and hypnotics.

Iris was the Goddess of the Rainbow. I do not know if there is any connection between her and the iris of the eye, but it is reasonable to deduct such a connection since the color of the iris is the outwardly distinguishing thing about the eye.

Last we have Hygeia, daughter of Aesculapius, who with another daughter Panacea assisted in the temple rites and fed the sacred snakes.

In closing, may I add a few words about Aesculapius, the Patron Saint of Medicine, son of Apollo by the nymph Coronis. He was the God of the Healing Art, so proficient that Pluto accused him of diminishing the shades, the ghosts of mortals, in Hades. He is commonly represented as a Jove-like figure with the Caduceus, a rod twined by one sacred snake. Destroyed by a thunderbolt of Jupiter, he became an object of worship. His followers formed an organized guild of physicians; the temples of his cult were at Cos, Epidaurus, Cnidus and Pergamus. These temples, commonly situated upon wooded hills, near mineral springs, became popular sanitaria, managed by trained priests and not unlike the health resorts of modern times. After appropriate prayers, a bath in the mineral springs with massage, inunction and the like, a cock or ram was sacrificed before the image of Aesculapius. The patient then lay down to sleep in the temple or sanctuary. His dreams were interpreted by the priests, who prescribed whatever treatment seemed best. If the treatment was successful and the patient was cured, he then presented a thank-offering to the god, usually a model of the diseased part in wax, silver or gold, while a tablet giving the history of his case and its treatment was suspended in the temple.

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THE PATIENT—HIS OWN SURGEON AND NURSE

CASE REPORT

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The review of the history and findings in this case have proved to be so interesting that it seems worth reporting. It shows what a man may be able to do, if only on a rare occasion.

This eighty-three-year old man, Mr. F. B., sixteen years ago, had severe pain and distress in the right upper abdomen. He had been sick for some time and had hired a practical nurse to help him in his illness. One afternoon when the pain was very severe he decided to be his own surgeon. He painted the swollen, painful area in the right upper abdomen with iodine and carefully washed his razor. With one quick stroke he made a two to three inch incision through the skin and into the cavity of the swollen area. This incision began about four inches to the right of the midline, slightly above the navel and extended upward and outward. From this incision came one large, gray, dome-shaped gallstone, three centimeters long and 2.7 centimeters across at the base, and a large amount of bloody, bile-stained fluid.

He at once called his nurse and showed her what he had done. She promptly fainted. In order to get further help from her he had to be the nurse and get out of bed and get cold water to revive her. About a week or two later, another large faceted gray stone, three centimeters long and 2.3 centimeters across, was expressed from the draining wound. During the next several weeks three smaller faceted brownish stones came out. The wound continued to drain bile but no more stones could be felt. He finally went to a physician who probed the wound but could not find more stones.

The wound healed after several weeks. He had no further trouble until about November 1, 1941. He went to see Dr. R. Y. Netolicky who has verified the history, on November 8, 1941, because of distress in the upper abdomen similar to that in 1926. He was treated symptomatically but soon lost his appetite. On December 2, he was seen at the medical relief office where it was noticed that he was jaundiced. The patient thought his gallbladder had ruptured into his blood about December 1, 1941, and he wanted his surgeon, Dr. Netolicky, to do the operating this time, although he had tried using home remedies to open up the old wound and had produced slight ulceration of the skin in the retracted scar. His condition became rapidly worse, he ate very little, and had to urinate every hour.

He was admitted to St. Luke's Hospital Decem-

ber 23, 1941, deeply jaundiced and very ill. He brought the stones, which he had kept in a small bottle, with him. He expected his surgeon to remove more stones at the hospital, but his surgeon wisely considered the dangers and futility of an operation at this time. The surgeon did not feel that stones were the cause of the trouble this time. The patient's condition rapidly became worse and he died January 4, 1942.

At the necropsy January 5, 1942, he was deeply jaundiced. Carcinoma at the head of the pancreas had almost obliterated the common duct about three centimeters from the ampulla. There was slight ulceration of the skin of the retracted scar, which was attached by dense scar tissue to what remained of the gallbladder. This remnant of the gallbladder was about three centimeters long; the cavity appeared about one centimeter across and the wall was ten to fifteen millimeters thick. Stones were not found. Many small metastatic nodules were found in the liver which weighed 1,309 grams.

CONCLUSION

This self-styled emergency surgeon saved the operative expenses in 1926 and enjoyed many hours in demonstrating the stones and relating their history, yet the question arises: might not surgical removal of the gallbladder in 1926 have prevented the present termination?

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

CARCINOMA OF THE STOMACH WITH KRUKENBERG-TYPE OF OVARIAN METASTASES

A. B. NESLER, M.D., J. W. LAWRENCE, M.D.
and LUKE FABER, M.D., Dubuque

In 1896 Krukenberg¹ called attention to a distinct type of ovarian tumor which has since borne his name. While his description of the tumor was correct, he erroneously concluded that the neoplasm was primary in the ovary and classified it as a sarcoma although he recognized the presence of epithelial elements. Later studies by various investigators have shown that the tumor is a carcinoma and while rarely primary is usually secondary in the ovary. The case to be described is representative of this interesting group of cases which are being reported with increasing frequency.

CASE REPORT

The patient, a white woman fifty-five years of age, was admitted to The Finley Hospital for the second time January 18, 1942, because of "profuse

vaginal bleeding with pain and tenderness in the pelvis."

Family History: The patient's father had died of cancer of the stomach and her mother of "typhoid malaria." Four sisters and one brother were alive and well. There was no history indicating tuberculosis or diabetes.

Past History: The patient had had diphtheria, measles and whooping cough as a child but was otherwise well until thirteen years before the present illness when she developed gastric distress after eating, accompanied by nausea, frequent vomiting and loss of considerable weight. At one time, she vomited bright red blood. A diagnosis of gastric ulcer was made but her symptoms persisted in spite of the treatment given and eight years ago she went to the Mayo Clinic where the same diagnosis was made although the patient stated that no ulcer was demonstrated by means of the x-ray studies. She was put on the Sippy regime which she followed with marked relief until ten months ago when the gastric distress, nausea and vomiting returned. At that time she was first admitted to this hospital and a diagnosis of operable, gastric carcinoma of the lesser curvature was made. A gastric resection of two-thirds of the stomach with an anastomosis of the jejunum to the remaining portion of the stomach was performed according to the technic of Strauss. The only demonstrable metastases were in the glands of the gastrohepatic and gastrocolic ligaments and they were removed. The patient made an uneventful recovery and left the hospital in three weeks. At home she gained thirty pounds, felt well and had a good appetite until the onset of her present illness. The menopause occurred six years ago.

Present Illness: Two weeks before admission, the patient began to have profuse vaginal bleeding, at times containing clots of blood. Her abdomen became distended and her appetite which previously had been good, failed. She also lost fifteen of the thirty pounds in weight which she gained since her operation eight months ago.

Physical Examination: The patient was a thin, moderately pale, white woman. All of the teeth had been extracted. The mucous membranes were pale but clean and there was no jaundice. The eyes, nose and ears were essentially negative. The thyroid gland was moderately enlarged and somewhat nodular. The cervical and supraclavicular lymph nodes were not enlarged. The breasts were pendulous and lax and no masses could be felt in either instance. The heart was normal to percussion and auscultation. The blood pressure was 188/110. The lungs were clear throughout. The scar of the previous operation was firm and no masses could be felt beneath. The liver's edge

could not be palpated. The right kidney was felt to be twice the normal size but this had been true at all previous examinations and it had not increased in size since before the operation eight months ago. There was dulness for about four fingers' breadth above the pubis and here a tender, hard mass apparently extending down into the pelvis could be felt. On vaginal examination, the mass was firmly fixed in the pelvis and seemed to be the left ovary; on the right there was a much smaller mass. Each was separate from the uterus which was not enlarged. The uterine cervix was normal.

X-ray Examination: An x-ray examination of the lungs showed no metastases. The esophagus was negative. The stomach was functioning well and there was no evidence of recurrence of the carcinoma. There were no metastases in the lower spine or in the pelvic bones.

Laboratory Examination: The blood examination showed a white blood count of 10,400, and a red blood count of 4,000,000 with hemoglobin 69 Sahli units. The urinalysis showed only a faintly positive albumin test.

Provisional Clinical Diagnosis: Bilateral ovarian tumors, probably malignant.

Course in the Hospital: The patient was given a transfusion of 700 cubic centimeters of blood and general preoperative treatment for two weeks when a laparotomy was performed.

Operative Notes: A mass eighteen centimeters in diameter with the shape of the ovary was found in the left side of the pelvis. The opposite ovary was five centimeters in diameter; each was solid and seemed malignant. A frozen section confirmed this opinion. Three loops of bowel were adherent to the larger mass and to the bladder but were easily separated. The larger mass was found to be pedunculated and was easily removed with its oviduct. The right ovary was also removed. There were a few nodules beneath the serosa of the uterus and numerous similar nodules were found in the peritoneum of the pelvis. There was no evidence of local recurrence in the stomach and no metastases could be felt in the liver or elsewhere in the abdomen.

Postoperative Diagnosis: Metastatic carcinoma of both ovaries, the uterus and pelvic peritoneum.

Pathologic Examination: The specimen consisted of the left and right ovaries with their oviducts. The latter were not remarkable. The left ovary measured seventeen centimeters in its longest diameter and the outer surface, while faintly lobulated, was smooth and there was no evidence of the extension of a neoplasm through it. On section there was a fairly definite capsule and the cut surface was spongy and moist. In some areas there were small hemorrhages. The right ovary

averaged five centimeters in diameter. On section it was homogeneous, being composed of spongy, gray, translucent tissue. (See Fig. 1.) The mi-



Fig. 1. Photograph of the bisected ovaries.

croscopic studies showed an abundant and cellular stroma composed of spindle cells scattered through which there were epithelial cells appearing singly, in strands or in clumps which in some areas were identical with the cells in the gastric carcinoma removed eight months previously. In others they appeared as degenerating cells in which the nuclei were forced to one side forming the so-called signet ring cells. In others only a shadow of the cell appeared. The histologic picture was the same in each ovary.

Pathologic Diagnosis: Bilateral, metastatic, ovarian carcinoma of the Krukenberg type (primary in a gastric carcinoma).

Subsequent Course: The immediate postoperative course was uneventful. The vaginal bleeding ceased and she felt well. She was discharged two weeks after the operation and at present (April 1, 1942) she is doing her own housework although her family has been warned of the dubious prognosis.

Comment: In addition to being an example of an interesting tumor, this case is noteworthy because the father of the patient died of carcinoma of the stomach which suggests a genetic predisposition. The prolonged history indicates a gastric ulcer which apparently underwent malignant change. This is not uncommon and serves to emphasize the need for middle-aged patients with such lesions to guard against the possibility of malignancy especially if there is a hereditary factor in the family history. Finally, the case indicates one of the pitfalls which present themselves in attempting treatment of cancer. We were hopeful that the gastric resection had resulted in a cure and apparently this was true locally, but the ovarian metastases which were not evident at the time of the first operation, preclude such a result.

GENERAL DISCUSSION

In his paper, Krukenberg described these tumors as firm, solid growths usually of moderate

size, sometimes somewhat lobulated, rarely tending to form adhesions to neighboring structures and frequently accompanied by ascites. The tumors are bilateral, retain the general shape of the ovary and one of them is usually considerably larger than the other. On section they have a capsule, are solid or spongy, may show one or more cysts and often resemble myxomatous tissue. Histologically, the sections from different tumors and different areas of the same tumor show variations in the cellular elements. Usually the stroma is richly cellular but may be firm, edematous or may resemble myxomatous tissue. The epithelial elements may appear as acini or as widely separated cells. In true Krukenberg tumors, the epithelial cells usually show more or less mucoid degeneration and have a signet ring appearance or they may appear as mere outlines of the original cells. However, as Novak and Gray² have pointed out in some cases all gradations, between a secondary adenocarcinoma with more or less mucoid tendency to tumors in which all trace of acinous structure is lost, are encountered.

Statistics indicate that these tumors are comparatively rare according to Jarcho³ who has been especially interested in them. Phillips⁴ found reports of about 125 cases up to 1937. Woodall⁵ found nearly 150 cases in 1939. Undoubtedly, as many investigators have stated, the tumor occurs more frequently than the statistics show. Most authorities believe that while neoplasms of this type may be primary in the ovary, the overwhelming majority are secondary to malignant tumors of the breast, gallbladder, pancreas, colon or stomach. So often is the stomach the primary site, it is a surgical axiom that before doing radical surgery upon gastric carcinoma, the surgeon must be certain that the ovaries are free from this type of metastasis. Likewise, before the gynecologist undertakes radical surgery upon ovaries of this type, he must be certain that a gastric carcinoma is not present. By keeping these axioms in mind, the number of patients subjected to surgery without hope of cure can be reduced.

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STATE DEPARTMENT OF HEALTH

Ward Biering

Rocky Mountain Spotted Fever, 1933-1941

In June, 1933, the first case of Rocky Mountain spotted fever to be reported in Iowa was notified to the State Department of Health by C. N. Freiligh, M.D., of Waucoma in Fayette County. During the nine year period from 1933 to 1941, reported cases of this disease in the state have totaled 99. The accompanying map shows the 41 counties (black shading) in Iowa which have reported one or more cases of spotted fever during the past nine years.

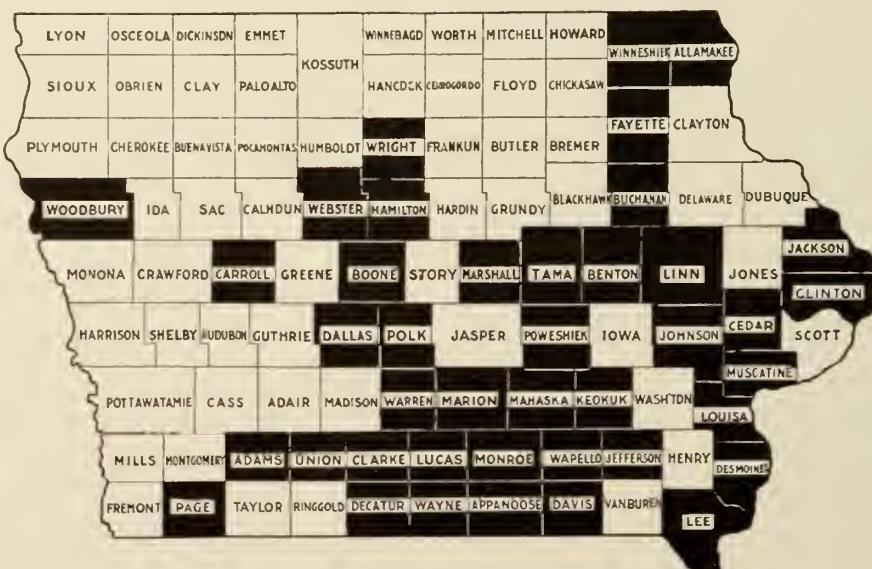
The following table lists cases of Rocky Mountain spotted fever as reported in Iowa for the period from 1933 to 1941:

Year	Number of Cases
1933	6
1934	5
1935	6
1936	1
1937	15
1938	5
1939	28

1940	19
1941	14
Total.....	<hr/> 99

Symptoms and Signs

Onset of illness is usually sudden, often starting with a severe chill. Other symptoms include fever, headache, vomiting, aching of limbs and general discomfort. On about the third day, reddish macules, irregular in outline and size, make their first appearance, as a rule on the forehead, wrists and ankles; later they become generalized over the body and extremities. Drowsiness or stupor may be present in the severe case, also neck rigidity and ankle clonus. Inquiry usually leads to a history of tick bite or exposure to the wood tick (common dog tick). Clinical diagnosis is confirmed by a positive agglutination test (Weil-Felix reaction). Agglutinins are likely to be present in the blood by the tenth to fourteenth day.



COUNTIES REPORTING ROCKY MOUNTAIN SPOTTED FEVER 1933-1941

Outbreaks and Multiple Cases

The fifteen cases of Rocky Mountain spotted fever reported in 1937 included an outbreak (six cases) on the Indian Reservation in Tama County, and three cases in a rural household in Clarke County. In 1940, six of the nineteen cases occurred in Des Moines and Lee Counties, with a common source of infection at a boy scout camp. Two other patients were members of the same family in Washington County. Among the 39 cases reported in 1939 and 14 in 1941, all were of sporadic occurrence in different households.

MILK-BORNE OUTBREAKS STRESS NEED FOR PASTEURIZATION

The consuming public is becoming increasingly conscious of the protection afforded by pasteurization of our milk supplies. This is evidenced by the increased demand for pasteurized milk, in small as well as large communities. Many towns in Iowa, ranging in population from 1,000 to 1,500, now have access to pasteurized milk.

The need for proper pasteurization of public milk supplies is brought to attention very forcefully by the report of disease outbreaks conveyed through milk and milk products in the United

States in 1940 as summarized by the Sanitation Division of the United States Public Health Service. Outbreaks of epidemic disease as reported from twenty-two states in 1940, numbered 41 and included 1,845 cases. The report states that 33, or 80 per cent of the 41 epidemics, were traced to raw, sweet milk. Of two outbreaks of bacillary dysentery, one was conveyed by raw milk and accounted for 120 cases.

Food poisoning and gastro-enteritis were the clinical conditions in connection with seventeen epidemics comprising 1,052 cases. Sweet milk in raw form was the vehicle in nine instances, ice cream in five and raw buttermilk in two of these outbreaks. Among five epidemics of scarlet fever and septic sore throat (482 cases), raw milk was the medium of infection in all instances. Milk-borne outbreaks of typhoid fever numbered thirteen, totaling 95 cases, with five deaths. Raw, sweet milk was the transmitting vehicle in twelve of the thirteen epidemics; in ten instances, a carrier or suspected carrier was mentioned as the source of contamination.

The Public Health Service report for the year 1940 also lists four outbreaks of brucellosis or undulant fever (nineteen cases), spread by four raw milk supplies; three of the four herds gave laboratory evidence of Bang's disease.

PREVALENCE OF DISEASE

Disease	Mar.'42	Feb.'42	Mar.'41	Most Cases Reported From
Diphtheria	10	14	18	For the State
Scarlet Fever	232	230	273	Scott, Polk
Typhoid Fever	2	1	2	Clarke, Webster
Smallpox	0	5	14	For the State
Measles	1445	694	829	Webster, Humboldt, Mahaska Bremer
Whooping Cough	107	84	226	For the State
Brucellosis	14	19	12	For the State
Chickenpox	496	402	548	Woodbury, Dubuque, Boone Des Moines
German Measles	8	14	8	Washington, Muscatine, Mills Greene
Influenza	14	28	618	For the State
Mumps	764	581	1139	Mahaska, Dubuque, Linn Des Moines
Pneumonia	238	209	239	Clinton, Polk, Appanoose Wapello, Carroll
Poliomyelitis	0	0	1	For the State
Tuberculosis	54	53	75	For the State
Gonorrhea	173	141	97	For the State
Syphilis	221	228	209	For the State

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RESUME OF THE ANNUAL SESSION

Measured by all the yardsticks customarily employed for judging the status of a medical meeting, the Ninety-first Annual Session of the Iowa State Medical Society was an unqualified success. In the matter of attendance, 729 members were registered during the two and one-half day period. Although this does not establish a new record, or even equal some of previous years, nevertheless it ranks close to the top and frankly is a larger number of physicians than we had thought would or could come, in view of the war situation. It was interesting to note the number of men in uniform, and to see how eagerly they were surrounded by other physicians wanting to gain first-hand information about military affairs. The war and military medicine were undoubtedly the two thoughts uppermost in the minds of most of those present, and probably were responsible for bringing together such a large number of physicians. In addition to the 729 members present, there were 92 exhibitors, 74 visitors, among them 15 internes, and two hundred registered at the Woman's Auxiliary meeting.

All of the scientific sessions were well attended and the addresses were well received. It was not uncommon to see twenty-five or more persons standing in the rear of the main session room listening to the speaker, with about three hundred seated at all times. Many favorable comments were heard about the guest speakers. Too often, the JOURNAL thinks, we are likely to take for granted the effort and personal sacrifice these men make in coming long distances to appear before us. We noted with approval that the section chairmen thoughtfully extended the thanks of the Society to the speakers as they finished their addresses. Courtesies of this kind are not lightly

forgotten. The custom begun in Davenport last year of assigning hosts to care for each guest was repeated this year, and we believe it is a courtesy well worth continuing.

The chairman of the scientific exhibit section should feel well repaid for his efforts toward making this an outstanding portion of our meeting, because the exhibits this year deserved especial commendation. The large number of physicians who visited them is testimony to the fact that they were appreciated. Dr. Frank P. McNamara of Dubuque was awarded top honors for his exhibit of autopsy records; honorable mention went to Dr. William E. Ash of Council Bluffs for his exhibit on the new conditioned reflex therapy of alcoholism, and to Dr. Julius S. Weingart of Des Moines for his exhibit on pathologic records.

The chairman of the scientific motion picture exhibit was definitely disappointed in the little interest shown by the membership in the program arranged for them. The films covered a wide range of subjects; they were of exceptionally high caliber and offered a most valuable teaching medium, yet only a handful of physicians were present at any one time to view them. The JOURNAL feels that the Society is greatly indebted to the chairman for his work in selecting and procuring the films, and regrets that so little interest was evidenced by the majority of physicians. However, those who did visit this portion of the meeting had only the highest praise for the showing.

Thirty-four firms brought commercial exhibits to the meeting, all of them of high quality. Their convenient locations on the first three floors of the hotel and their courteous attendants who were ready to demonstrate to all interested physicians, made them a very valuable contribution to the meeting, and we hope that the benefit was reciprocal. From the constant presence of physicians in the various booths throughout the two and one-half day session, we feel that the exhibitors should be pleased with their participation.

Mention should be made of the Hobby Show, that refuge of relaxation for the weary doctor in his too few spare moments. The chairman of this section performed sterling service in more than doubling the usual number of exhibits, and in bringing to light many examples of fine handiwork among our physicians. A special article might well be devoted to a description of both the Hobby Show and the scientific exhibit section, but since space does not permit in this editorial, the JOURNAL expresses the appreciation of the Society for the work of the twelve men who prepared scientific exhibits, and the twenty-seven physicians who participated in the Hobby Show.

Both the smoker and the banquet were well attended. Dr. Bush in his presidential address outlined clearly the position of the physician in relation to the war. Dr. Winkler, as president elect, lauded the accomplishments of the medical profession and deplored attempts to undermine the confidence of the people in its integrity and competency. Both of these addresses will be carried in the June issue of the JOURNAL.

The business of the society as transacted in the House of Delegates will be published in full in the July issue of the JOURNAL. We may say here that Dr. Lee R. Woodward of Mason City was named president elect, and that Des Moines was again selected as the place for next year's meeting. It was also voted to restrict next year's session to two days and to limit the number of guest speakers to four. The JOURNAL feels both Dr. Woodward and the Society are to be congratulated upon his selection; Dr. Woodward, because of the honor his colleagues have bestowed upon him and the confidence they have expressed in him by so doing; the Society, because it has selected as its leader during difficult times, a man of proved worth and one of the state's outstanding physicians.

MAY 1—CHILD HEALTH DAY!

In 1928 the Congress of the United States passed a resolution directing the President each year to designate May 1 as Child Health Day. This has been faithfully carried out every year since the resolution was passed, and the President issued his proclamation for 1942 some weeks ago. This time he specifically called upon the people of all communities to undertake the immunization of every child over nine months of age against diphtheria and smallpox.

We in Iowa may well take this call of the President to heart, for our record, particularly in the field of smallpox prevention, is black indeed. During the year 1940 there were no reported cases of smallpox in the states of Pennsylvania, New York, Vermont, Massachusetts, Connecticut and New Jersey, while in Iowa alone 412 cases occurred. Particularly embarrassing to all Iowans should be the report from Pennsylvania that during 1932 seven cases of smallpox occurred in that state—all but one of which occurred in a family within a few days of their coming from Iowa. The seventh case was the only secondary one and occurred in a barber who cut the hair of one of the Iowa persons. When disease is transported across state lines by animals or fruit, regulations are set up requiring inspection at the border. Perhaps the citizens of Iowa should be

stopped at the border of states free from smallpox and satisfactory evidence of immunity against the disease be presented before they are granted permission to enter. Perhaps we need something like this to arouse us to the point of indignation necessary to take steps to eliminate smallpox from this state as has been done from the eastern states mentioned. It can be done here by the methods employed there. Therefore, the primary thought for this year's Child Health Day is to prevent smallpox and diphtheria. Our President has requested it. Let us cooperate in what we all know is a worthwhile objective.

However, there is more to be considered on this Child Health Day than immunization, granting that it is of utmost importance. The maintenance of child health services under conditions arising out of the war situation imposes difficulties and responsibilities infinitely greater than those obtaining in peace time. Dislocations are being caused in many ways. The time is rapidly approaching when the demands of the armed forces for physicians must of necessity reduce available medical personnel in many communities to a bare minimum. When this time comes it seems reasonable to suppose that the physicians remaining to care for civilian needs will have all they can do to meet emergencies. It should be urged, therefore, that now, while facilities are still adequate, physicians and families cooperate in securing for each member of the family, children included, complete health check-ups and the immediate correction of such deficiencies as are detected, whether they be physical, nutritional or in the field of disease prevention.

The migration of many families to the region of ordnance plants, to industrial areas and to military bases is certain to overtax, for a time at least, existing medical facilities. The provision of even minimum standards for child health services in these areas will be no easy task. Yet it must be accomplished. Normally, this is the time of the year when the Summer Round-Up of the Children campaigns are carried on throughout the nation. Since their program is in direct line with present day needs, it is to be hoped that their facilities will be used to the maximum this year and for the remaining years of the war.

Finally, there is the financial dislocation which will be caused in many families as the result of the bread winner being called into military service. No child in such families must be permitted to lack adequate medical care. Yes, Child Health Day this year takes on special significance. It is well that we give it serious consideration. Safe-

guarding the health of the growing and developing child is one of the nation's major responsibilities. The job cannot, must not and will not be neglected now.

NEW CURE FOR GONORRHEA

A five-day cure of acute gonorrhea in eighty per cent of the cases is described in the March issue of *Venereal Disease Information*, published by the United States Public Health Service. This method of treatment is the recommendation of the Executive Committee of the American Neisserian Medical Society.

The precise number of gonococcal infections acquired in the United States each year is not known, but evidence indicates that several million acquire the disease. In time of war, gonorrhea presents a serious problem in the armed forces.

The solution of the gonorrhea problem devolves upon the individual physician, to effect a complete cure of the individual patient in order to prevent spreading of the disease. It is also the physician's responsibility to place under treatment the source of the patient's infection and all those to whom the disease may have been transmitted.

The five-day method of treatment consists in the oral administration of 4.0 grams of sulfathiazole daily in divided doses for five days. Treatment should be started as soon as the diagnosis is made, and in 80 per cent a cure results in one week. In the 20 per cent who do not respond to chemotherapy or who are free from symptoms but continue to harbor the gonococcus, a rest period of one week is recommended, followed by another five-day period of sulfathiazole therapy. If symptoms persist or smear or cultures remain positive, mild local treatment is recommended. In patients who are intractable to chemotherapy and in certain complications, fever therapy is employed. After treatment by chemotherapy the patient with gonorrhea is considered cured if he is free from symptoms for three months, or if cultures are negative.

The elimination of gonorrhea as a national problem and the maintenance of the man power of the armed forces and of the factories of the nation demand total war on venereal disease. Sulfathiazole therapy offers a new hope in the eradication of this disease, but it is only by the cooperation of individual physicians working in conjunction with health authorities that complete eradication can be accomplished.

The obligation of the physician is not only the cure of the individual patient who may spread the disease. In every community, and particularly in defense, industrial and military areas, the impetus

for the eradication of prostitution, honky-tonks, brothels, etc., may properly originate with the physicians of the community.

MEDICAL TESTIMONY*

Through the years, medical expert testimony has been subjected to a withering blast of criticism, some of which has been justified; much has been unfair and unjust.

All men, including physicians, come of common clay, and hence are subject to moral weaknesses. A few are frankly dishonest; others may be unconsciously led into partisanship on the witness stand, but most of them try to tell the whole truth when questioned in court. You will notice the use of the word "try." It is used advisedly because honest witnesses often find it next to impossible to tell the truth because of the obstructive tactics of trial lawyers. There is an old moss-covered saying among lawyers to the effect that "There are three kinds of liars; plain liars, d—n liars and expert witnesses." It is quite noticeable that the lawyers who are most active in suppressing the truth if it is unfavorable to their side of the case are most likely to find delight in this cynical quotation. We all know that the functioning of democracy has its weak points. The same thing is true of trial law. When a court trial becomes a game to win or lose, right or wrong, the truth is nothing but a pawn in the hands of contesting attorneys.

That medicolegal rackets have existed and still exist is not to be denied. In many large cities and thickly populated districts, unscrupulous lawyers have been able to employ crooked medical men for the purpose of trumping up false claims of personal injury or property damage. In some districts these rackets have been so active that the premiums on liability insurance have become quite excessive.

Since murder trials create a great deal of publicity and in some cases make large witness fees possible, some physicians have, through desire for notoriety or pecuniary gain, been guilty of partisanship in their testimony.

The state of Minnesota has, apparently, had its share of racketeering; hence it is a matter of interest that the Minnesota State Medical Society has inaugurated a reform movement calculated to restrain falsifying medical witnesses. It has appointed a Committee on Medical Testimony and placed at its head, Dr. E. M. Hammes of St. Paul. Dr. Hammes is a neuropsychiatrist of note and of unquestioned integrity, and is en-

*From the Medicolegal Committee.

dowed with the discretion and courage needed for such a position.

It is obvious that ethical censorship of medical experts may be a very difficult matter, but if no other restraining influence can be invoked, publicity and exposure of the culprits should meet with the hearty approval of the medical profession, the legal profession and the public at large. While we know of very few dishonest physicians, we, of the medical profession, are anxious to clean house and elevate our ethical and moral standards. For that reason we applaud the Minnesota experiment.

RENAL DAMAGE FOLLOWING CHEMO-THERAPY

The increasing use of chemotherapy in the treatment of acute infections demands reiteration of the possible toxic effects of these drugs on the human organism. The careless and promiscuous use of the sulfonamides is fraught with danger.

The literature emphasizes the occurrence of renal complications following sulfapyridine therapy, and recently similar reports of renal injury following sulfathiazole therapy have been recorded. Sulfadiazine has been in use for too short a time to evaluate the possible toxic effects on the kidney.

The effects on the kidney consist of mechanical blocking of the ureters by crystals of sulfathiazole or acetyl sulfathiazole, or obstruction of the tubules within the kidney itself, and a primary toxic effect on the glomeruli and tubules. The pathologic results have been demonstrated in experimental animals and in autopsies on patients who have succumbed from renal failure.

The symptoms of renal damage during sulfathiazole therapy are hematuria, progressive oliguria, backache, tenderness over one or both kidneys, decreased renal function, increase in the blood urea and progressive enlargement of the kidney. Sulfathiazole crystals are present in the urine but the mere presence of the crystals does not necessarily indicate kidney damage. Cystoscopy demonstrates a mechanical block and as the ureteral catheter is passed a grating sensation is experienced.

Before chemotherapy is employed, a urinalysis should be done and some concept of the patient's renal function should be determined. In the presence of impaired kidney function, excessive blood levels may result from accepted dosage, and serious kidney damage may occur. During the use of the drug the fluid intake and output should be recorded and if an adequate output is

not maintained in spite of sufficient intake, renal damage should be suspected. It has been reported that an alkaline urine tends to reduce the formation of crystals, and that alkalis should be administered along with sulfapyridine and sulfathiazole.

When the diagnosis of renal damage is made the drug should be discontinued immediately, cystoscopy and ureteral catheterization should be done, and fluids should be administered in large quantities.

The physician who employs chemotherapy is obligated to protect the patient from injury by the drug employed. The possibility of renal damage must be entertained in every patient who receives the drug. The maintenance of a large fluid intake and the careful observation of the patient for evidence of kidney damage should constitute an integral part of the treatment.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Board of Trustees March 29, 1942

The Board of Trustees of the Iowa State Medical Society met in the central office Sunday, March 29, 1942, with the following persons present: Trustees Oliver J. Fay, John I. Marker and Lee R. Woodward; R. D. Bernard of the Legislative Committee; Robert L. Parker, secretary; Earl B. Bush, president, and E. C. McClure of the Finance Committee. Minutes were read and approved; bills were authorized; a lease for the office quarters was negotiated; the necessary expenses of the delegates and the secretary for attending the meeting of the American Medical Association were authorized; purchase of new office equipment was approved; and the accounts of the Legislative Committee were audited and approved. Meeting adjourned at 12:30 p. m.

Meeting of the Council April 17, 1942

The Council held its final meeting of the annual session on Friday, April 17, following the meeting of the House of Delegates. Those present were Drs. L. L. Carr, C. H. Cretzmeyer, J. B. Knipe, J. E. Reeder, E. F. Beah, James C. Hill, H. A. Householder, C. A. Boice, R. C. Gutch and J. G. Macrae. Dr. Reeder was re-elected chairman and Dr. Macrae, secretary, for the ensuing year. Dr. M. C. Hennessy and Dr. Ellyson spoke briefly in farewell to the Council; Dr. Reeder explained the program of the Committee on Industrial Health to the new members; committee appointments for 1942-1943 were made and the chairman was authorized to fill any vacancies which might occur; and the cancer committee's program and the tumor clinics in the state were discussed.

(Continued on page 238)

Procurement and Assignment of Physicians*

Roy W. Fouts, M.D., Omaha, Nebraska

The fact that there are so many physicians in this room at this hour is an indication that you are interested in the problem in which you should be interested at this time. Certainly, there never has been a time since this war started that looked any worse than it does now.

I shall review briefly the things which led to the part the doctors are taking in this work, which is unprecedented. Never in the history of this or any other country has the profession been given the job of assigning, so to speak, or of handling its own profession—of saying, "This group of men is qualified and can be spared for the armed forces and this group cannot be."

There is not a single layman in any way, shape or form connected with Procurement and Assignment. There is not a single army officer serving at the present time. Dr. Seeley, who is now Colonel Seeley, was loaned to the Procurement and Assignment Service as its Director from the Surgeon General's office. He does not sign his name as "Colonel" or "Major", as he was at the time, but prefers to be called "Doctor." Therefore, I say the job is in our hands. It is true that we have to appeal for some money with which to operate, but other than that the job is up to us. I am sure that we will do the job and I mean every one of us will help.

The program had its beginning, as no doubt most of you know, two years ago this summer when a representative of the Surgeon General's office appeared before the House of Delegates of the American Medical Association, in New York, and asked that the American Medical Association make a survey and determine the medical strength of this country. That was two years ago last June. As soon as the committee was appointed it met (that was the Committee on Medical Preparedness) and outlined the program as best it could at that time. The following day three of its members went to Washington and on that day the work started.

You are all familiar with the questionnaire we filled out that summer. It went into the American Medical Association headquarters; it was catalogued and card indexed and set up by one of those machines which can sort the cards and give you any information you want. In addition to that questionnaire which we individually filled out on which we gave our qualifications, a number of other surveys have been made by the specialty so-

cieties and the state societies to determine exactly how much training each physician has had and whether or not he is capable of heading some particular service in a large hospital. This was done for every member of the profession. We have been classified and graded 1, 2, 3 and 4, as far as the specialties are concerned, and the men in general practice have also been classified. This work has been going on ever since the Committee on Medical Preparedness was organized.

One of the first things we of the committee did was to have a survey of the medical schools and their faculties made, asking the deans to submit lists of men essential on the faculties. That was done and the lists reviewed, and we have had new lists submitted since the change in the scholastic year, because we appreciate the fact that the medical schools must carry on. They must turn out 5,000 medical officers for the Army every year. Classes which would have started in September will start in July and students who would have been graduated next spring will be graduated in February. So much for that phase of the question.

I think it was in September, following the appointment of this committee, that we requested some sort of organization or committee similar to what is known as the Procurement and Assignment Service. I was asked last Sunday what "assignment" means. It is a hard question to answer. But, I think in the beginning it was thought it might be necessary, and it may be, but we hope it will not, to dislocate some practitioner from his present location and ask him to go into another community. As far as I know that has not yet been necessary in this corps area, and I hope it never does become necessary because it will be a much bigger job than getting officers for the Army and the Navy.

After the Procurement and Assignment Service was set up through the state chairmen, and in every instance except one in this corps area the state chairman who was appointed by the officers of the state medical society became the state chairman for the Procurement and Assignment Service, a survey was made through this committee.

I might mention just briefly that there are only three points on which a man may be declared essential in his present location. One is upon the basis of community need. Does his community need him? Does industry need him? Is he employed in such a manner that industry will be crippled if he is taken, or can someone replace him? If the industry is large and he has an organization set up within it, no one wants to dis-

*From the Committee on Medical Preparedness. Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

rupt that organization, and so that man is declared essential to industry. This does not apply to the man who has an industrial practice, or is taking compensation work. Such a man is not particularly essential. I am speaking of an industry which employs several thousand men, two thousand at least, and which requires a medical division. It is not thought best to move the man directing that activity from his present location.

Another need is for educational purposes in medical, dental or veterinary schools. I might say that our Corps Area Committee is comprised of those three professions. Each profession has a chairman and each individual state has its own set-up for making the survey on the basis I have just mentioned. These surveys are practically completed. Provision was made, particularly in the smaller towns and communities where perhaps there are only two doctors, for determining whether both were essential or whether one could be spared. We consider that our obligation to the community is second only to the job of winning the war, and as far as I have been able to observe up to the present time, a very fine job has been done by each individual state chairman and his committees. We have encountered no difficulties and we have had no complaints from doctors as yet, which is very gratifying. We have found that as soon as we can establish a proper understanding with the state selective service director and he can convey that information to his individual county boards, we have no difficulty in getting a deferment for any professional man. We do not expect to lose a doctor to the service, and if you know of an instance in which such a possibility would seem imminent, all you have to do is to let our office or the state chairman know. The state directors are cooperating 100 per cent. In the latter part of February Dr. Seeley asked me to contact all of the state selective service directors and explain to them that we were attempting to supply them with all the medical personnel they needed, but at the same time we thought we had an obligation to protect the communities, and if they would just let us work it out, we would be able to do a good job. As I said, we have had 100 per cent cooperation from every state selective service director and I have no doubt it will continue. General Hershey went so far as to declare to the individual boards that even premedical students are to be given deferred classification. Any premedical student who is registered in a Class A medical school is given deferred classification through his college years and his year of internship. With very few exceptions we have had no difficulty there. However, we must appreciate the fact that Congress gave

the local draft boards all of the power and no one can take it away from them. Even the director of selective service can only suggest to them. The chairman of each Corps Area Procurement and Assignment Service should be consulted whenever a professional man is to be inducted into service, and his recommendation will be taken into consideration in deciding whether or not to induct the man.

The need is great. I do not need to tell you gentlemen that. You know as much about it as I do. The last figure I have is that we will need 16,000 more doctors by the last of this year or the first of 1943. They want 2,500 by the first of July and 600 more after that. When I talked with Dr. Seeley a week ago Tuesday about an address before the American College of Surgeons he said, "You tell those men that now is the time for every man under forty-six years of age to apply for commissions and tell them to apply either to the corps area surgeon or to the Surgeon General because my office is snowed under."

I might give you an idea of how the results of these surveys work. As soon as the Procurement and Assignment Service was set up, the Adjutant General of the Army as well as the Surgeon General of the Army and the Navy informed all of their corps area surgeons and the men in the naval districts that all applications for commissions in the Army and Navy or the Public Health Service would be immediately followed by endorsement to the Procurement and Assignment Service, meaning that the applications had to go through that service first to see whether or not the physicians were available or were essential in their present location. When an application is made to the Army or the Navy or the Public Health Service, that man's name is immediately sent to the Procurement and Assignment Service and to the state chairman to determine whether or not he is available. As soon as the application is cleared through the Procurement and Assignment Service, there is only one other place to which it goes, and that is to the office of the American Medical Association in Chicago for confidential information. The information gleaned from the questionnaires that we filled out and all the additional information have been transferred to punch cards and sent to Washington for the national roster. The confidential information on file in the American Medical Association headquarters deals more particularly with the type of practice, whether the physician is ethical, a drug addict or an alcoholic, etc. Such information was not transferred to Washington. If the man is found to be available, an application will then be mailed to

him and he can make application to the Army or the Navy, whichever service he desires to enter.

As I said, the system is working very satisfactorily and I am sure that with the cooperation of the medical men it will continue to work. It is not the object of the Procurement and Assignment Service to choose a man and say, "You are the fellow. You should go." Instead it works something like this. A survey is made of a community having twelve or fifteen doctors. We estimate that one doctor is sufficient for a population of 1,500 to 2,000 persons. On that basis, three physicians could be spared. The younger men, the men under forty-five years of age, will probably all be marked as available. No doubt more than three of them will want to go into the service, but when three have gone, the rest will be classified as being unavailable or essential in their present location. It may be necessary to change the classifications as things get worse, but that is the present plan.

I do not know if this concerns you so much in this state as it does in some others, but our biggest job has been the question of senior internes and residents in some of the largest cities. We believe we have the answer. I think we worked it out in St. Louis last Friday. One of the municipal hospitals there has six residents, six senior internes, I believe, some junior internes and some medical students, and felt it could not spare a single one of those residents or senior internes. It occurred to me while discussing it to suggest that all of those residents and seniors apply for commissions. If they are rejected, we will then put them on the essential list and we believe we will have enough cripples or rejections to operate these places. We believe we can build a pool so that we will have enough men to take the places of those who go. We think it is unfair to hold a resident in an institution, to give him another year, if he is capable of service. If he is rejected, however, we will declare him essential.

Now I do not want to take up a lot of time, but does anyone here have any questions?

Dr. Suchomel: I wish you would discuss the coming questionnaire and the modes of recognition.

Dr. Fouts: That is the questionnaire for which we have all been and are still waiting. It was to have been mailed April 14 but I have not seen or heard of anyone getting it. You are asked to fill out that questionnaire immediately, the day you get it. It will come in a franked envelope and a return franked envelope will be enclosed. It will ask you to enroll with the Procurement and Assignment Service which, in effect, will be saying that you will proffer your services wherever they

can best be used. You will work where it is felt you can serve best. Of course, it will be your privilege to refuse at any time, but I believe that when the need is appreciated we will have enough doctors responding so that we need have no fear of not doing the job. The Procurement and Assignment Service has no authority whatever to compel any doctor to do anything. No one has any authority except the local draft board. Even if you apply for a commission and receive it but something happens in the meantime so that you do not feel it best for you to serve, you can return that commission up until the time that you have signed the oath. You are not in the army until you take the oath of office, but when you take that oath of office you are subject to orders.

The question that has come to us is the question of rank. Generally speaking, men under thirty-five years of age will be commissioned as first lieutenants in the army and lieutenants, junior rating, in the navy, unless they have some particular qualifications or some particular specialty, in which case they might be given a captain's commission. Above thirty-six years of age a man will be commissioned solely upon his training, experience and ability, depending upon what place he is to fill.

In the beginning it was said that a certificate would be issued to all who enrolled with the Procurement and Assignment Service, thanking the doctor for proffering his services but saying that until such a time as he was needed, it was felt he was essential in his present location. A button was supposed to go with this certificate, but when things began to develop, we saw what a tremendous amount of expense and labor was involved and so that plan was dropped. Eventually some other may be adopted.

The reason these applications are so far behind is the immense amount of printing the government printing office in Washington is doing. As you know, there was a time when they could not print defense bonds fast enough and they requisitioned all the printing presses and ran twenty-four hours a day. They have had hundreds of millions of cards in connection with sugar rationing and automobiles and tires and everything else, so that is why our questionnaire has not gone out long before this and why it may be some time before we can get our certificates.

Colonel Shane: A great many men over forty-five years of age ask if there is any way they can be provided for as contract surgeons?

Dr. Fouts: I asked for that information more than three weeks ago but I have had no answer as yet. However, I may say that any doctor up to fifty-five years of age, if he passes an ordinary examination, may be commissioned. In a few in-

stances, if he can pass a good enough examination, he may be chosen for particular spots or locations due to his particular ability. Are there any further questions?

Question: What about reserve officers past sixty-five years of age?

Dr. Fouts: It is my impression that he is on the active list. I will say that the Procurement and Assignment Service has nothing to do in any way, shape or form with reserve officers, nor do we attempt to make any recommendations. That is the Surgeon General's job. Since you have mentioned reserve officers, there was a statement about four or five months ago to the effect that all reserve officers who had gone on the inactive list since August, 1940, were automatically put back on the active list. That stood for a time, in fact, until about three weeks ago when Attorney General Biddle ruled that this was illegal and would not stand. Therefore, the men who became inactive, who permitted their commissions to lapse, or became inactive, are out. They must make application again.

Question: I think the main thing that a lot of young men would like to know, particularly those who are under forty-five years of age, is what happens if they do not apply for commissions. Of course, they are subject to the draft, but if the man has dependents, say, three children, will he be placed in the 3-A dependent class?

Dr. Fouts: As far as the local draft board is concerned, it would classify him as having dependents, which would put him in 3-A, as you stated, but as far as the Procurement and Assignment Service is concerned, it does not take into consideration anything except whether he is essential to the community, to an industrial or educational need. As a commissioned officer he would receive a salary of \$3,152.00 a year and his family would not suffer on \$3,152.00 a year.

I have been approached more than once by an elderly surgeon, sixty-five years of age or more, still active, who for several years has had an assistant who has developed into a very good young surgeon. I know of two instances that are typical of this. They have big practices and both of them have said, "I just do not know what is going to happen to me if my assistant is taken. I just can't carry on." Well, the answer is, "Doctor, do you think that the people won't get good competent surgical attention if this doctor is taken? Perhaps you won't have as big an income tax to pay next year if he is taken. Perhaps you may have to work harder and you may even have to cut out some of the calls you are having the young man make, but do you think that

Omaha will suffer because of his being taken into the army?" The answer, of course, is "No." We do not take into consideration, you cannot take into consideration, gentlemen, the extent of a financial sacrifice anyone is going to have to make. If you do, there will be no place to start and no place to stop, and, therefore, it is not considered in any way, shape or form, as far as determining whether a man is essential.

Dr. Suchomel: Dr. Fouts, I have a couple of questions to ask you. One is the requirements of the service for different specialties.

Dr. Fouts: Do you mean the number?

Dr. Suchomel: Yes.

Dr. Fouts: They will need about 3,500 surgeons, about 1,300 orthopedists, a few more than 1,000 radiologists, and 7,000 general practitioners.

Dr. Suchomel: The other question is, can the men find out their classifications at the American Medical Association headquarters?

Dr. Fouts: You are speaking with reference to the Procurement and Assignment Service. No, they cannot find out at the American Medical Association headquarters. The corps area office and the state office has it.

Question: Does that mean the number they want now?

Dr. Fouts: That is right. That is on the basis of 24,000 and that was before they asked for 6,500 more for the Air Corps, which would put it up to 30,000. At the time this bulletin was issued, about a month ago, there was a need for 24,000 physicians, and they had about half of them. Approximately 2,000 have come in since, and it is said that they will need 16,000 more by the first of the year.

Question: What is the status of the reserve officer who has been placed on the inactive list because of the physical examination?

Dr. Fouts: As far as the Procurement and Assignment Service is concerned, he is classed as being essential in the location where he is and releases somebody else who might pass the examination. There are many things, gentlemen, that we must change. We are in a war, and we just must get to thinking along that line. We cannot go on as we have gone before. This is no time to think about anything except doing the job that is there for you to do. Maybe it is in the army and maybe it is to stay at home. I believe that we are going to need 50,000 doctors before another twelve months, and we must start to think along that line. Our first job is to win this war and it is going to be a long job. I would have you spread that gospel.

WOMAN'S AUXILIARY NEWS

MRS. H. I. MCPHERRIN, *Chairman of Press and Publicity Committee*
5822 North Waterbury Road, Des Moines

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

STATE CONVENTION REPORT

The sessions of the Thirteenth Annual Convention of the Woman's Auxiliary to the Iowa State Medical Society were held at the Hotel Kirkwood in Des Moines, April 14 and 15, 1942.

On Wednesday morning, April 14, the executive board held its regular meeting. Twenty-one members were present. At this meeting, the officers, committee chairmen and county presidents discussed informally their past accomplishments and future plans. Throughout the whole convention, the war and its relation to auxiliary members were uppermost in the thinking of those present. At one o'clock the executive board met together for luncheon.

In the evening at six-thirty the Auxiliary entertained husbands and friends at a Smorgaasbord dinner. This was a pleasant, informal affair and was attended by 198 persons. During dinner, entertainment was provided by a group of students from Grand View College in Des Moines who presented Danish folk dances. Miss Nancy Hornaday and Miss Caroline Hempleman danced two numbers and the Burt Brothers, four entertainers from Radio Station WHO, played an accordion and stringed instruments.

After the program the doctors left the group for their smoker and the women were entertained by a delightful skit, presented under the direction of Mrs. John T. Hecker of Cedar Rapids.

On Thursday morning, April 15, at nine o'clock, the regular meeting was called to order by Mrs. W. R. Hornaday of Des Moines, president. The invocation was given by Mrs. E. A. Hanske of Bellevue; past presidents in attendance were introduced and the minutes of the 1941 convention were read and approved. An address of welcome was given by Mrs. Julius S. Weingart, president of the Polk County Auxiliary and the response was made by Mrs. F. W. Mulsow, president-elect from Cedar Rapids. Committees were announced and the officers, committee chairmen and county presidents gave their annual reports, all of which will be found in this and succeeding issues of the JOURNAL.

At eleven o'clock Mrs. Wilma Phillips Stewart of the Des Moines *Register* staff gave an interesting and timely talk on "Nutrition in Disguise". The convention ratified the action of the board at the 1941 fall meeting, in establishing a loan fund for

student nurses, and empowered the incoming president to appoint a committee of three to arrange details for handling the fund. The nurses chorus from Broadlawns General Hospital under the direction of Mrs. Percy Potter closed the morning session by singing a group of four songs.

After luncheon Mrs. Hornaday introduced Dr. Earl B. Bush of Ames, president of the Iowa State Medical Society, who spoke of the readjustments which all must make due to the war, and of the importance of the continued influence of the doctor's wife in the community, especially in the realm of stabilizing the younger generation and influencing them to continue their education as far as possible. He urged that there be no let-up in the ministrations of the Auxiliary members, even when the doctors are called into their country's service. Dr. Frank P. Winkler of Sibley, president-elect of the Iowa State Medical Society, was introduced. Dr. Winkler also stressed the dislocations due to war, and urged Auxiliary members to assume community as well as family responsibilities in such a time, to maintain their Auxiliary strength and to be aware of their importance as a contact between the profession and the public. Dr. James C. Hill of Newton, chairman of the Woman's Auxiliary Advisory Committee of the Iowa State Medical Society, addressed the group and his remarks will be found elsewhere in this section.

Dr. Thomas A. Burcham, chairman of the Medical Advisory and Health Council of Iowa Civilian Defense, explained the purposes of that organization. It serves to protect water supplies, to guard against communicable diseases and to protect the health of workers and civilians. It sponsors a nutritional program for conserving resources and health. It has made a survey of all Iowa hospitals to establish the number of beds and facilities; target areas have been surveyed for available services in time of need. Dr. Burcham urged Auxiliary members to take advantage of available service courses, and then to make those services useful to agencies which might require them.

Mrs. James A. Downing awarded the Gertrude Downing Cup to the Dallas-Guthrie Auxiliary which won the most points in the achievement goals. Election of officers and remarks by the outgoing and incoming presidents concluded the convention. Mrs.

Hornaday's daughter, Nancy, served throughout the session as page.

Mention should be made of the interesting exhibits on display in the convention room. A nutrition project was set up by the Homemaking Department of Roosevelt High School, the Iowa Division of the Women's Field Army exhibited three large posters on cancer control; and the *Hygeia* committee displayed posters and pamphlets, and distributed copies of the magazine.

The following officers were elected for the year 1942-1943:

Mrs. Frederick W. Mulsow, Cedar Rapids.....	President
Mrs. William S. Reiley, Red Oak.....	President-Elect
Mrs. Earl C. Montgomery, Atlantic.....	First Vice President
Mrs. Matthew J. Moes, Dubuque.....	Second Vice President
Mrs. C. E. Birney, Estherville.....	Third Vice President
Mrs. Frederick J. Swift, Maquoketa.....	Fourth Vice President
Mrs. Allan G. Felter, Van Meter.....	Secretary
Mrs. Arthur E. Merkel, Des Moines.....	Treasurer
Mrs. Fred Moore, Des Moines	
Mrs. Elbert T. Warren, Stuart	
Mrs. William R. Hornaday, Des Moines	Directors

Mrs. H. I. McPherrin, Chairman,
Press and Publicity Committee

PRESIDENT'S REPORT

As we meet today we are concluding our thirteenth year as an Auxiliary to the Iowa State Medical Society. With the uncertainty of the times and the outbreak of war, we have had a busy year adjusting our Auxiliary life to the needs of the hour. The cooperative spirit of each officer, committee chairman and member has made this task easier and brought about satisfactory results. We close the year with nineteen counties and 381 members. While we have no new counties to report we do have thirty-two members at large which give us contacts in many counties. Every one of these nineteen county organizations is active and meeting regularly.

I will dwell briefly upon the various committee projects, because each chairman will speak for herself. They have all worked diligently to do the best in their particular fields. If our program subject, "Nutrition", was important when we chose it, it is much more important now. The whole world is food conscious and eager to learn about the right foods. We discussed not only foods necessary for body growth and health but also the preventive and curative uses of food and the consumer's problem. This study has been most helpful to members as they take up nutrition courses and canteen work in our National Defense Program.

Our Public Relations Committee has made a sincere effort to meet Iowa people, to learn what they want in health education and to help them secure that information. We believe that authentic health information should come from the medical profession, and consequently we have worked with the Speakers Bureau of the Iowa State Medical Society and placed medical speakers before many lay groups.

Our ninth and possibly our last essay contest was carried out successfully by Mrs. W. A. Seidler who started this contest in 1933. The winner, Margie Royer of Brighton, read her essay over Radio Station WOI, in Ames, Wednesday, March 25.

We have stressed the placing of *Hygeia* in schools and public places and also suggested that back copies be collected and placed in school libraries for reference. Many articles on nutrition in *Hygeia* were used in our program study.

We are grateful to the Medical Society for the reprints of our News Page. These are sent to our homes and keep us informed as to what other counties are doing and in touch with the State Auxiliary Program. The Medical Society also generously donated \$150.00 to our budget and made it possible for your president to visit auxiliaries and help in carrying out our plans. This year I visited Cass, Dallas-Guthrie, Dubuque, Jackson, Montgomery, Upper Des Moines, Polk, Pottawattamie and Wapello Auxiliaries. It was a real pleasure to meet with these groups and see the splendid cooperation among them. I attended the meeting of the Woman's Auxiliary to the American Medical Association in Cleveland last June and the National Board Meeting in Chicago in November. Mrs. Mosiman, our National President, was our guest in November, at which time the Polk County Auxiliary entertained at a luncheon in her honor.

Our big undertaking this year was the starting of a Nurses Loan Fund to help girls complete their training if at any time that goal seemed impossible for financial reasons. We are starting from "scratch," but with the support of each and every doctor's wife we will be able to help Uncle Sam fill his quota of nurses. We are also interested in helping the nurse find enjoyment during her leisure time by having dramatic classes, chorus work, etc.

As we close this year, I do want to express my appreciation to the office staff at the Iowa State Medical Society for their many kindnesses in getting out letters; to Dr. Priestley for his counsel and help in the Essay Contest; to Dr. Bierring and his staff for their courtesy at the State Fair last year; and to each and every member who has helped to make this year a busy but happy one for me.

Mrs. W. R. Hornaday, President

PRESIDENT-ELECT'S REPORT

As President-Elect, I have served as Chairman of the Organization Committee, cooperating with the four vice presidents. Necessary instructions and materials were sent to each chairman early in the year. Each of us has contacted members either personally or by letters in our respective districts, attempting to organize county auxiliaries. Letters were written for permission to each president of the county medical society.

Names of the doctors' wives in the counties not interested and from disbanded auxiliaries were obtained and over two hundred explanatory letters were sent to them, giving every doctor's wife the opportunity of contact with the State Auxiliary by becoming members at large. To date, ten new members have responded to these letters. Over four

hundred and fifty letters were sent in addition to many personal ones.

I attended the fall board meeting at Des Moines in October and, through the kindness of Mrs. Hornaday, had the pleasure of attending the National Board Meeting in Chicago in November. This was a very instructive and pleasant occasion.

Mrs. F. W. Mulsow, President-Elect

NUTRITIONAL EXHIBIT FROM ROOSEVELT HIGH SCHOOL

One of the most interesting exhibits displayed at the state convention this year was from the Home-making Department of Roosevelt High School in Des Moines, which has been making a study of the nutritional programs of countries at war and their effect upon the civilian population. Under the supervision of Miss Helen McCleery, director of the Home Economics Department, Des Moines, and Miss Gretta L. Wolfe, instructor at Roosevelt High School, Roosevelt High School girls set up an exhibit showing the weekly allowance of food for a man in the United States, England and Germany. A comparison of national diets as specified by nutritional scientists is a difficult task due to uncertainties of individual requirements and statistics, but the Roosevelt High girls compared the available food in each country with the "normal" period in the same country. They used as their nutritional yardstick the sort of diet that implies a known level of physical health and welfare. In a very colorful exhibit of real food, with flags of the countries and a large chart showing the levels of nutrition, the essential food values were definitely pictured. This exhibit followed a study of several weeks and give the girls a fine opportunity to put into practice some of the experiences discussed. Material for the study was secured through the American Home Economics Association, the United States and Foreign Departments of Agriculture and current publications.

Dubuque County

Newly elected officers of the Woman's Auxiliary to the Dubuque County Medical Society are: Mrs. Henry M. Pahlas, president; Mrs. John C. Pickard, vice president; Mrs. Roy I. Theisen, secretary and treasurer; and Mrs. Lucille Cooley, assistant secretary and treasurer.

Mrs. M. J. Moes, Secretary

Montgomery County

The Woman's Auxiliary to the Montgomery County Medical Society recently elected the following officers for the current year: Mrs. Oscar Alden of Red Oak, president; Mrs. Elmer M. Sorensen of Red Oak, vice president; and Mrs. Edward J. C. Panzer of Stanton, secretary and treasurer. The members have been working for the new Red Oak Murphy Memorial Hospital, and several of them assisted at the opening on Sunday, March 15.

Mrs. E. J. C. Panzer, Secretary

THE SPIRIT OF THE AUXILIARY

James C. Hill, M.D., Newton

A unique experience is mine to extend greetings to you, the better half of the medical profession.

In sundry times and in divers places it has been my humble task to talk, but not before to the elite of the profession. You are loyal to the best interests of those with whom you have been called. Each of you has an enduring faith in the work of your husband. When his spirit is bruised, so also is yours. The superb qualities of mind and heart, which within you lie, revitalize his every act and purpose.

You are that intangible "something" that either moulds or mars the vital success of your helpmate. Your emotional response to the trust that his patients repose in him is quickening. This will enable him to keep his powers of endeavor from waning. Not even the torments of the telephone should be held by you in lasting remembrance.

Through the ramifications of your organization there runs the golden thread of service. You sponsor an educational service that shows no spirit of defeatism nor disintegration but is rather vibrant and illuminating. Your plasters and tonics are beyond the trial stage, and quick and quack remedies have gone the way of all flesh. It takes unbroken faith and steady nerve to keep thirteen working committees going at top speed, but I would prefer St. Vitus dance to rigor mortis.

As an auxiliary organization you work in a friendly environment. Turmoil, uncertainty and futility exist, but you must face the future with courage and enthusiasm. "The very insecurity of our times is a challenge to your genius and confronts you with opportunities worthy of your mettle." You know full well the chilled and arrested phase through which our nation is passing. So, steel your nerves, overcome anxieties, let them not have dominion over you, and face the future with a high heart.

SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

May 6-8 Incidence and Prevention of Accidents

Emerson J. Steenrod, M.D.

May 13-15 Stomach Ache

Guy E. McFarland, Jr., M.D.

May 20-22 Diet and the Growing Child

Orville D. Thatcher, M.D.

May 27-29 Prenatal Care

Addison W. Brown, M.D.

BOOK NOTES

Both laymen and members of the medical profession who have been curious about the phenomenal success of the Mayo brothers may now discover some of the underlying reasons in Helen Clapesattle's biography *The Doctors Mayo*. In her book the author shows how the lives of the father and his two sons coincided with the development of the midwest and the practice of modern medicine and surgery. Each of the three men were "naturals" in ability, a factor which contributed greatly to their achievements. The most revealing characterization in the book is the reply which Dr. W. J. Mayo gave a visitor who was exclaiming over the robes and certificates of honor which fill a large space at the Clinic.

"Yes, we have them from all over the world. To be frank about it, we have accomplished much, my brother and I. But we should have done great things; we were given the opportunity. We were born at the right time and to the right parents. Perhaps no one will ever again have the opportunity to accomplish so much. That day is gone, unless for some genius. We were not geniuses. We were only hard workers. We were reared in medicine as a farmer boy is reared in farming. We learned from our father."

The one precept which the Mayo boys did learn from their father and actually apply was, "No man is big enough to be independent of others." Their whole career was an evidence of their faith and re-

spect in the abilities and opinions of others. Father and sons spent many hours and many dollars traveling to see other doctors at work.

It is fascinating to learn something of the character and career of Father and Mother Mayo. Fact and fiction about the boys flourished even during their lifetime, but little was known about the parents. Both were dominant people whom pioneering could not break. To supplement the very slender income from medicine, the old doctor was tailor, politician, orator and farmer by turns. He was the sort of a man who mortgaged his farm to buy a new microscope. The best anecdote in the book (and there are countless ones) is the story of Mother Mayo disrupting a church service when she cried out: "God almighty, I left my bread in the oven!" and tore down the aisle to the door.

Along with the two sections about father and sons, there is one devoted to the history of the Clinic Foundation which dates from the now famous cyclone of 1883. There are many photographs and extensive bibliographic notes. *The Doctors Mayo* is lengthy, verbose and repetitious, probably because the author had such a wealth of material to draw upon that it was difficult to eliminate any. The element of hero worship is to be expected from one who has made a thorough study of great men. Until something better comes along, which, we have an idea will not be for a long, long time, we recommend *The Doctors Mayo*.

Mrs. K. M. Chapler

SPEAKERS BUREAU ACTIVITIES

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF MAY

Marshalltown Hotel Tallecorn 6:30 p. m.	May 5	Treatment of Arthritis (with motion pictures) Peter T. Bohan, M.D., Kansas City
Grinnell Hotel Monroe 6:30 p. m.	May 12	Diagnosis and Treatment of Peripheral Vascular Disease Horace M. Korns, M.D., Iowa City
Jefferson Greene County Hospital 6:30 p. m.	May 21	Sex Hormones: Clinical Application Willard O. Thompson, M.D., Chicago

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF MAY

Cedar Falls Sartori Hospital 6:30 p. m.	May 5	Chest Injuries Jerome R. Head, M.D., Chicago
Atlantic Atlantic Hospital 6:00 p. m.	May 14	The Macrocytic Anemias Jerome R. Head, M.D., Chicago

SOCIETY PROCEEDINGS

Bremer County

The combined monthly meeting of the Bremer County Medical Society and the staff of St. Joseph Mercy Hospital was held at the Fortner Hotel in Waverly, Monday, March 23. The scientific program consisted of the following motion pictures: Postencephalitic Parkinsonism, by Drs. Dillenberg and Neal of New York; and Scarlet Fever, by Drs. Dick and Dick of Chicago.

O. S. Blum, M.D., Secretary

Dallas-Guthrie Society

The Dallas-Guthrie Medical Society met Thursday, April 9, in Panora for the following program: Use of Sulfonamide Drugs in Diseases of the Eye, Ear, Nose and Throat, Cecil C. Jones, M.D., of Des Moines; and Use and Abuse of the Sulfonamides in General Practice, Lynn T. Hall, M.D., of Omaha, Nebraska.

Greene County

The regular monthly meeting of the Greene County Medical Society was held at the hospital in Jefferson, Thursday, April 9. Speaker for the occasion was Arnold M. Smythe, M.D., of Des Moines, who discussed Children's Diseases.

John R. Black, M.D., Secretary

Iowa County

J. Stuart McQuiston, M.D., of Cedar Rapids, furnished the scientific program for the Iowa County Medical Society at its regular quarterly meeting held at the Doose Hotel in Marengo, Tuesday, March 17. Dr. McQuiston spoke on Diseases of the Liver.

Johnson County

Members of the Johnson County Medical Society were guests of the University Hospitals at the meeting held Wednesday, April 8 in Iowa City. R. J. Hennes, M.D., presented the paper of the evening on Toxemia of Pregnancy; the discussion was opened by Paul A. Reed, M.D., and John H. Randall, M.D.

A. H. Sahs, M.D., Secretary

Linn County

The next meeting of the Linn County Medical Society will be held in Cedar Rapids, Thursday, May 14, with Harry E. Mock, Jr., M.D., of Chicago, as guest speaker. Dr. Mock will speak on Refrigeration Anesthesia for Amputation. Another guest of the Society at this meeting will be Chester Coggeshall, M.D., also of Chicago, who will discuss The Medical Management of Peripheral Circulatory Conditions. Physicians in surrounding counties are cordially invited to be present for the session.

R. J. Stephen, M.D., Secretary

Monona County

Officers heading the Monona County Medical Society for 1942 are: Dr. Leo A. Gaukel of Onawa, president; Dr. Harold L. Ganzhorn of Mapleton, vice president; Dr. Paul L. Wolpert of Onawa, secretary and treasurer; Dr. John S. Deering of Onawa, delegate; and Dr. Emil C. Junger of Soldier, alternate delegate.

Montgomery County

Dr. Oscar Alden of Red Oak is president of the Montgomery County Medical Society. Other officers are: Dr. Elmer M. Sorensen of Red Oak, vice president; Dr. Edward J. C. Panzer of Stanton, secretary and treasurer; Dr. William S. Reiley of Red Oak, delegate; and Dr. Carroll C. Nelson of Red Oak, alternate delegate.

Muscatine County

Newly elected officers of the Muscatine County Medical Society are: Dr. Lysle C. Howe, president; Dr. Parke M. Jessup, vice president; Dr. Elmer H. Carlson, secretary and treasurer; Dr. Howe, delegate; and Dr. George A. Sywassink, alternate delegate. All officers are of Muscatine.

Osceola County

The annual election of officers for the Osceola County Medical Society resulted as follows: Dr. Earl P. Farnum of Sibley, president; Dr. Herbert B. Paulsen of Harris, secretary and treasurer; Dr. Wilbur F. Thayer of Ocheyedan, delegate; and Dr. Paulsen, alternate delegate.

Palo Alto County

Dr. Herbert M. Huston of Ruthven was named president of the Palo Alto County Medical Society at the annual meeting of that organization. Officers serving with him are Dr. Francis X. Cretzmeyer of Emmetsburg, vice president; Dr. William P. Davey of Emmetsburg, secretary and treasurer; Dr. Cretzmeyer, delegate; and Dr. George H. Keeney of Mal-lard, alternate delegate.

Plymouth County

Officers heading the Plymouth County Medical Society for 1942 are: Dr. Roman J. Fisch of Le Mars, president; Dr. Harry L. Vander Stoep of Le Mars, vice president; Dr. Laurence C. O'Toole of Le Mars, secretary and treasurer; Dr. Walter J. Brunner of Akron, delegate; and Dr. Martin J. Joynt of Le Mars, alternate delegate.

Polk County

The next meeting of the Des Moines Academy of Medicine and Polk County Medical Society will be held Wednesday, May 20, at Younkers Tea Room in Des Moines with the following program: Acute Eye Injuries, John H. Tait, M.D., discussion opened by Benjamin F. Kilgore, M.D.; Close Relation of Pelvic Conditions to Urology, Clifford W. Losh, M.D., discussion opened by Abraham G. Fleischman, M.D.; The Frontier of Malignancy, Edward J. Harnagel, M.D., discussion opened by John B. Synhorst, M.D.; and Differential Diagnosis of the Hemorrhages of Pregnancy, Floyd W. Rice, M.D., discussion opened by Addison W. Brown, M.D.

Pottawattamie County

Meeting in regular session Tuesday, March 17, the Pottawattamie County Medical Society viewed motion picture films on Sex Hormones—Physiology, Diagnosis and Therapy.

Ringgold County

Newly elected officers of the Ringgold County Medical Society are: Dr. Franklin C. Smith of Mt. Ayr, president; Dr. James W. Hill of Mt. Ayr, secretary and treasurer; Dr. Elbert J. Watson of Diagonal, delegate; and Dr. Oscar L. Fullerton of Redding, alternate delegate.

Sac County

The Sac County Medical Society met at the Park Hotel in Sac City, Thursday, March 26. James E. Reeder, Jr., M.D., of Sioux City, presented a discussion of The Common Cold and Its Sequelae.

W. L. Evans, M.D., Secretary

Scott County

Harold I. Lillie, M.D., of the Mayo Clinic, Rochester, Minnesota, was guest speaker for the final meeting of the Scott County Medical Society before the summer recess. The meeting was held in Davenport, Tuesday, April 7, and Dr. Lillie's address was on his specialty, that of diseases of the eye, ear, nose and throat.

J. H. Sunderbruch, M.D., Secretary

Taylor County

The Taylor County Medical Society met in Lenox Monday, April 6, and entertained Norman M. Johnson, M.D., of Clarinda, who spoke on Carcinoma of the Colon.

Wapello County

Evon Walker, M.D., of Ottumwa, furnished the scientific program for the Wapello County Medical Society at a meeting held in Ottumwa, Tuesday, April 7. Dr. Walker spoke on Electrocardiography.

Wayne County

The Wayne County Medical Society met Tuesday, April 14, at the home of Dr. Carl F. Brubaker in Corydon. Carl F. Jordan, M.D., of the State Department of Health, Des Moines, presented an illustrated lecture on Pneumonia and Its Treatment. Officers of the group are: Dr. David R. Ingraham of Sewall, president; Dr. Carl F. Brubaker of Corydon, secretary and treasurer; Dr. Arthur E. Davis of Seymour, delegate; and Dr. Brubaker, alternate delegate.

Woodbury County

A business meeting of the Woodbury County Medical Society was held Thursday, April 9, at the Mayfair Hotel in Sioux City, to discuss the doctor's part in the nation's war effort. The scientific portion of the program was a demonstration film on Coramine.

W. K. Hicks, M.D., Secretary

Worth County

The annual meeting of the Worth County Medical Society was held April 8 with the following results: Dr. Burdette H. Osten of Northwood, president; Dr. Monroe P. Allison of Northwood, secretary and treasurer; Dr. Soren S. Westly of Manly, delegate; and Dr. Osten, alternate delegate.

M. P. Allison, M.D., Secretary

Iowa and Illinois Central District Medical Association

The annual meeting of the Iowa and Illinois Central District Medical Association will be held Thursday, May 14, at the Outing Club in Davenport. The scientific program will be held in the afternoon when Julius W. McCall, M.D., of Cleveland, Ohio, will present Laryngectomy and the Esophageal Voice, illustrated with kodachrome films, both still and motion pictures. Willard O. Thompson, M.D., associate professor of medicine at the University of Illinois School of Medicine, Chicago, will speak on Recent Advances in Endocrinology. Dinner at six o'clock will be followed by election of officers and the presentation of the association's fifty year gold button to Drs. Karl Vollmer of Davenport, W. L. Eddy of Milan, Illinois, and W. F. Meyers of Coal Valley, Illinois. The session will close with an address on Plastic Surgery by Claire LeRoy Straith, M.D., chief of the division of plastic surgery at the Harper Hospital in Detroit, Michigan.

James Dunn, M.D., Secretary

Northwest Iowa Medical Society

The regular meeting of the Northwest Iowa Medical Society was held at the Arlington Hotel in Sheldon, Tuesday, March 24, with Dr. Walter R. Brock of Sheldon in charge. Speakers for the evening were Earl B. Bush, M.D., of Ames, who spoke on Medical Affairs in the Army; and William D. Paul, M.D., of Iowa City, who gave a demonstration on The Use of the Gastroscope in the Diagnosis of Gastric Lesions.

PERSONAL MENTION

Dr. Frank P. Winkler of Sibley announces the association of Dr. Frank M. Rizzo with him in the practice of medicine. Dr. Rizzo was graduated in 1940 from Loyola University School of Medicine, Chicago, and interned at Iowa Methodist Hospital in Des Moines.

Dr. George B. Crow of Burlington addressed the Burlington Junior Chamber of Commerce dinner meeting Monday, March 30, on "Selective Service Medical Requirements".

Dr. Donald W. Todd, who for the past year has been associated with Dr. LeRoy E. Jensen in Audubon, has located in Guthrie Center where he will take over the practice of Dr. Ralph L. McGilvra.

Dr. Robert J. Prentiss, associate in urology at the State University of Iowa, College of Medicine, has left Iowa City for San Diego, California, where he will enter the private practice of medicine.

DEATH NOTICES

Butler, Ralph Adolphus, formerly of Clinton, aged fifty-six, died suddenly April 7 at Safety Harbor, Florida. He was graduated in 1912 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Clinton County Medical Society.

Clarke, James Frederic, of Fairfield, aged seventy-eight, died April 12 after a year's illness. He was graduated in 1889 from the University of Pennsylvania, School of Medicine, Philadelphia, and at the time of his death was a Life Member of the Jefferson County and Iowa State Medical Societies.

Jenkinson, Ernest Albert, of Sioux City, aged seventy-one, died March 17 after a heart attack. He was graduated in 1903 from the University of Illinois, College of Medicine, Chicago, and at the time of his death was a Life Member of the Woodbury County and Iowa State Medical Societies.

Scott, Homer William, of Fort Dodge, aged forty-nine, died March 23 after an illness of several months. He was graduated in 1919 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Webster County Medical Society.

Peoples, Horace Robert, formerly of Burlington, aged forty-six, died March 27 at New London, Iowa, after an extended illness. He was graduated in 1921 from Northwestern University Medical School, Chicago, and had long been a member of the Des Moines County Medical Society.

Sibley, Samuel Edward, of Sioux City, aged seventy-two, died March 18 after a long illness. He was graduated in 1893 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Woodbury County Medical Society.

Spilman, Smith Augustus, of Ottumwa, aged eighty-nine, died suddenly April 11 after a heart attack. He was graduated in 1879 from Northwestern University Medical School, Chicago, and at the time of his death was a Life Member of the Wapello County and Iowa State Medical Societies. A more complete obituary will be found in the History of Medicine Section of this issue of the JOURNAL.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

(Continued from page 227)

Meeting of the Council
April 15, 1942

The Council of the Iowa State Medical Society met at the Hotel Fort Des Moines in Des Moines on Wednesday, April 15, 1942, with the following persons present: Drs. L. L. Carr, James E. Reeder, E. F. Beeh, C. W. Ellyson, H. A. Householder, C. A. Boice, R. C. Gutch, J. G. Macrae, M. C. Hennessy and F. P. Winkler. Minutes of the previous meeting were approved; Dr. Winkler discussed committee appointments with the members of the Council; and the program of the Committee on Industrial Health was discussed.

Meeting of the Council
April 16, 1942

The Council held its second session at the annual meeting on Thursday, April 16, with the following members present: Drs. L. L. Carr, C. H. Cretzmeyer, J. B. Knipe, J. E. Reeder, E. F. Beeh, C. W. Ellyson, H. A. Householder, C. A. Boice and J. G. Macrae. The probable changes in the 1943 annual meeting were discussed, and the Council voted to recommend to the House of Delegates that the meeting be a two-day rather than a three-day meeting, that the Eye, Ear, Nose and Throat section have a one-day meeting rather than two half days, that the House of Delegates meet at 4:00 p. m. on the second day for the election of officers, and that out-of-state guest speakers be limited to four.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. TOM B. THROCKMORTON, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

DR. WALTER L. BIERRING, Des Moines

DR. R. T. LENAGHAN, Clinton

DR. HENRY G. LANGWORTHY, Dubuque

Smith Augustus Spilman, M. D., F. A. C. S. 1853—1942

An Appreciation

A great noble figure in Iowa medicine has passed from our midst. A medical practitioner during six decades, a pioneer in Iowa surgery, former president of the Iowa State Medical Society, a cultured charming gentleman and stalwart American. Such was Dr. S. A. Spilman who died at his home in Ottumwa on Saturday, April 11, 1942, at the age of eighty-nine years. He had been active during the day, visiting with friends in the city as had been his daily custom ever since retirement from active practice in 1937.

Born in Jennings county, Indiana, he came with his parents to Wapello county, Iowa, in 1871. Before entering the study of medicine he was a teacher in Wapello and Keokuk counties rural schools. He began the study of medicine in 1876 at the Chicago Medical College, now Northwestern University Medical School, from which he was graduated in 1879.

He entered the practice of medicine soon after graduation. The time of his active professional service covers a period when medicine has perhaps made its greatest strides in history, and it may well be said that he was among the most progressive of his day. He represented the finest type of family doctor; his keen inquiring spirit kept him ever in the forefront of medical progress. He developed into a skillful operator, and with excellent surgical judgment he distinctly added to the achievements of modern surgery in Iowa. One of his last major operations was a splenectomy when he was nearly eighty years of age. Soon after the organization of the American College of Surgeons he was elected to Fellowship.

He was recognized as a leader and champion

of medical society organization. During the period when district medical societies exerted their greatest influence, he was an active member in the Southeastern Iowa and Des Moines Valley Medical Associations. He was a loyal supporter of his county society, and early in his career became a faithful attendant at meetings of the state society. He filled various positions of responsibility; the highest honor within the gift of the Society came to him in 1925, and at the Diamond Jubilee Session, one year later, he was installed as president. Just a year ago he came to the Davenport meeting at eighty-eight years of age, with the warm handclasp and winning smile that endeared him to all his friends.

The writer remembers, as if it were but yesterday, of a telegram received in Vienna in the early spring of 1893, from Drs. Spilman and W. B. LaForce, announcing their arrival that evening. That happy reunion in the beautiful city on the Danube engendered a friendship and fellowship that has grown ever stronger with the years, and is treasured as one of the joys that come along life's pathway.

A worthy son will carry on in Iowa medicine; promising grandsons and great-grandchildren will add further lustre to the Spilman name. To the bereaved wife, devoted helpmate of a lifetime of service, the profession extends sincere condolence.

Iowa medicine has been enriched by his labors, and the example of his sterling character and professional uprightness has added distinctly to the calling of medicine.

WALTER L. BIERRING, M.D.

Medical History of Webster County

By WILLIAM W. BOWEN, M.D.,
Fort Dodge, Iowa

(Continued from last month)

Dr. Albert A. Schultz

Dr. Albert A. Schultz was born at Tobias, Nebraska, May 2, 1887, the fifth child of eight born to Henry Carl Schultz and Catherine Schultz who were both natives of Germany. His parents moved while Albert was a small child to Bruning, Nebraska, where he attended the public and high schools, but his parents again moved to Ackley, Iowa, where he completed his high school work in May, 1902.

He learned the drug business in Ackley where his brother operated a drug store. After serving the necessary number of years in the store he took what was called the "Pluggers" course in Highland Park College in Des Moines and then took the examination under the State Board of Pharmacy at the age of eighteen years. He became an assistant pharmacist and automatically became a registered pharmacist at the age of twenty-one years. In the fall of 1907 he decided to study medicine and entered Lake Forest College, Lake Forest, Illinois. He only remained there one year and returned to Ackley to operate a drug store. The next year he matriculated at Northwestern University Medical School in Chicago from which he was graduated in June, 1911. He was appointed resident interne in Cook County Hospital and served there for eighteen months. He was affiliated with Phi Rho Sigma fraternity and was elected to membership in Alpha Omega Alpha fraternity.

In 1913 he married Miss Helen Louise Eggert of Iowa Falls and they have one son, William H. Schultz who is now director of publicity for the Iowa State Department of Health. Immediately after his marriage he went with his wife to Owensboro, Kentucky, and entered into practice with Dr. W. W. Stirman, a prominent surgeon in that vicinity. He remained one year and then came to Fort Dodge. Dr. Schultz says he had "pretty tough sledding" for about sixteen months and then began to make a living.

He volunteered in the U. S. Army in 1918, was given a commission as First Lieutenant, and sent to Camp Dodge. After a few weeks he was sent overseas and to Base Hospital No. 88. He was sent to Langres, France, and about a month later the Armistice was signed. He did not return to America until the middle of the summer

of 1919 when he was discharged with the rank of Captain in July. Since his return to Fort Dodge he has limited his practice to internal medicine and skin diseases.

He is a past president of the staffs of both Mercy and Lutheran Hospitals and past president of the Rotary Club in Fort Dodge. He was chairman of the Medical Section for the Iowa State Medical Society annual session in 1933, and again in 1941. He exerts a wide influence in civic affairs and a wider influence in medical affairs, and is listened to with attention whenever he speaks because he always has something to say that is strictly applicable. He is recognized as one of the best internists, not only locally, but in the state.

Dr. Edmond David Russell

Dr. Russell was born in County Limerick, Ireland, in 1869, and obtained his early education in the Christian Brothers schools in that country. His family then moved to Dublin and he was graduated in classics and mathematics in the high school of that city. He spent two years in the Jesuit College at Clongoweswood, County Kildare, and then entered the University of Dublin from which he was graduated. He then came to America and entered the Medical Department of the State University of Iowa in 1896, and settled in Clare, Iowa, in the same year. After a few years he attended the Chicago Clinical School and Post-graduate School, and moved to Fort Dodge in 1910 where he has since lived. He founded and edited the *Clare Examiner*, and has always been a contributor to journals and newspapers.

In 1899 he married Miss Johanna Wall of Johnson County, Iowa, whose parents were natives of Ireland. They have nine children; seven of them are girls and several of them are nurses.

The doctor is an orator and can quote page after page of Irish poetry. In ordinary conversation he is an interesting and delightful talker. There is nothing too absurd for him to say, and one can be assured that it will be original. One day he met a friend on the street and after some visiting he asked the friend if he knew where he could get one hundred dollars. The friend said he might see John Laufersweiler. Now it happened that Dr. Russell had had some very unpleasant experiences with Laufersweiler and did not like him.

Dr. Russell replied, with elaborate gesticulations, "John Laufersweiler! John Laufersweiler!! Before I would ask John Laufersweiler for a loan of \$100 I would go down to the gates of hell—I would reach two feet into hell and pull the ticks off of the monkeys and throw them out to the pelicans."

Dr. John F. Studebaker

Dr. John F. Studebaker was born September 20, 1874, in Pearl City, Illinois, the son of Simon and Charlotte Studebaker. He attended the public schools and Mount Morris College in Mount Morris, Illinois, and was graduated from McPherson College in Kansas. He was married January 14, 1900, to Miss Retta Glick and they have two children, Rowena and Leland. Leland is practicing medicine in Fresno, California.

Dr. Studebaker was graduated from Hahnemann Medical College in Chicago in 1906 and studied two years at the University of Illinois Medical College from which he was graduated in 1908. He came to Fort Dodge the same year and has practiced here continually except for nine months in Base Hospital service in the Medical Corps of the army in World War I. He is a member of the staffs of both hospitals here.

Dr. Studebaker is a hard worker and a student, and is always reliable. When he says he will do a thing he always does it. He has always been a good business man and is prosperous. He belongs to the Methodist Episcopal Church, and for a number of years was superintendent of the Sunday School.

Dr. James D. Lowry

Dr. Lowry was born in Fort Dodge, both of his parents coming from Ireland. He attended the parochial schools and Fort Dodge high school, and entered the State University where he was graduated in 1901. The same year he located in Fort Dodge and spent the rest of his life here. He was quite an athlete, especially a golfer and baseball player. Fort Dodge for some years maintained a junior ball team and Lowry played on it. One of the managers said that Lowry lost less games than any pitcher they had. He became a member of the State Board of Health, which position he held for five years. He was a genial companion, and fortunate was the one who secured him as a golf partner; he had such an abundance of Irish wit he always found some funny remark to apply to any condition that might arise. He died from pernicious anemia. He was a devoted Roman Catholic and a Republican and an upright and very good man. He was never married.

Dr. John Milton Garrett

Dr. Garrett was the son of Dr. J. M. Garrett and was born February 17, 1869, and died in Fort Dodge, August 18, 1934. He attended Parsons College at Fairfield, Iowa, for two years, then entered the Medical Department of the State University of Iowa, and later finished his medical studies, graduating from Marion-Sims College in St. Louis, in 1892. Returning to Troy, where he was born, he practiced for thirteen years. In 1895 he enrolled in Bellevue Hospital Medical College from which he was graduated in 1896. In May, 1905, he located in Fort Dodge, and practiced here successfully until his death.

During World War I he volunteered as a medical officer in June, 1918, and was assigned to duty with the rank of captain at Camp Joseph E. Johnston in Florida. He received an honorable discharge at the close of the war, and returned to Fort Dodge.

Dr. William F. Carver

Dr. Carver was born in Madison County, Iowa, December 6, 1869, the son of Caleb Carver who was a native of Lee County, Iowa. The doctor's grandparents had come to Iowa from Kentucky. The doctor's mother was Elizabeth Carver, a native of Illinois, of French ancestry. He was educated in the public schools and became a teacher and later a registered pharmacist. He began the study of medicine in The Iowa College of Physicians and Surgeons in Des Moines, but completed his medical studies in the Hospital College of Medicine in Louisville, Kentucky, in 1893, and entered general practice in Clarke County, Iowa, where he remained for six years. He then took a special course in the Polyclinic and Illinois Eye and Ear Infirmary and located in Fort Dodge practicing the eye, ear, nose and throat specialty. He was married in 1894 to Miss Edith Bishop of Des Moines. They had three children: Susan, who married Dr. Anderson, the inventor of the Anderson splint; William Franklin, Jr., who is now a successful doctor in Hollywood; and James Clayton who became a physician but died a few years ago.

Dr. Carver is a Freemason and a Methodist. Some years ago he built the Carver Building, an eight-story office and business building in one of the best locations in Fort Dodge which he still owns. He retired from practice in 1940 but still lives here. He has always been one of the best and most useful citizens of Fort Dodge, and always a free contributor to worthy progress. He is a fine gentleman and well liked.

Dr. William Russell Bates

Dr. Bates was born April 20, 1863, at Canehill, Arkansas. He was educated in the public schools and was graduated from the high school at Fayetteville in 1885. After two years at the University of Arkansas he entered the Medical Department of Michigan at Ann Arbor. Upon his graduation in 1891 he served as house physician for one year. In July, 1892, he located in Rock Rapids, Iowa, and practiced as a general physician until September, 1898. He went to London and entered the Moorfield Eye and Ear Hospital. When he returned to America he located in Fort Dodge, Iowa, where he has practiced continuously except for a year or two in San Diego, California. He was appointed by Governor Shaw to examine entrants to the Spanish-American War, was a member of the Medical Advisory Board during World War I, and is a member of the Pension Board now.

Dr. Bates is a very friendly fellow and never gets into any arguments. He loves to play golf and bowl. His wife was killed in an automobile accident in Los Angeles several years ago. He has three sons, all in California, but he lives here alone. He has always been too modest and unassertive for his own good, but it is doubtful if he has a single enemy.

Dr. Loren Marshall Martin

Dr. Loren M. Martin was born in Tolona, Illinois, May 9, 1872, the son of Dr. David T. and Susan M. Martin. While he was still a lad his parents moved to Manson, Iowa, and later to Pomeroy, Iowa, where his father was long a good and successful practitioner, and where Dr. Martin was mainly raised and where he was the usual mischievous boy, only a little worse. He attended Cornell College in Mount Vernon where he received his B.S. degree and then entered Rush Medical College in Chicago and received his M.D. degree in 1903. His father had been graduated from that school before him. He interned in Kensington Hospital, Philadelphia, and did postgraduate work in Berlin and Vienna for eighteen months. He became surgical assistant in the Mayo Clinic at Rochester, Minnesota, for fourteen months. Then he located in Sioux City and later removed to Texas where he operated his own hospital. He sold the hospital and went to Chicago and entered St. Luke's Hospital as chief resident in the eye, ear, nose and throat department where he served eighteen months. He then came to Fort Dodge where he has practiced ever since except during the war. He volunteered and was inducted into service in January, 1918. He went first to Camp Lewis and then went to France

where he served in Base Hospital No. 93 as a major. He was discharged in August, 1919.

He married Miss Jessie Shreeves in 1901; they have no children.

In 1940 he entered into a partnership with Drs. H. C. Kluever and C. H. Coughlan and they were doing a tremendous practice. However, Dr. Coughlan was called to the colors in 1940, shortly after the partnership was formed. Dr. Martin has been very successful financially, having acquired more wealth than any half dozen men who have practiced here.

Dr. Herman Christof Kluever

Dr. Kluever was born in Audubon, Iowa, February 21, 1902, the son of Chris and Pauline Hahn Kluever. He was educated in Jacob Thome School in Port Deposit, Maryland, and the University of Chicago where he received his B.S. degree. He entered Rush Medical College where he was graduated in 1924. His fraternities were Acacia, Phi Rho Sigma and Pi Kappa Epsilon. He was married to Lois H. Cobb, December 24, 1935, at Boone, Iowa.

He interned at Charity Hospital in New Orleans, Louisiana. In 1930 and 1931 he was assistant otolaryngologist in the University Hospital in Iowa City. He came to Fort Dodge in 1936 as an eye, ear, throat and nose specialist, and in 1940 united with Dr. Martin and Dr. Coughlan.

Dr. Kluever has been a contributor to various journals on subjects pertaining to his specialty. He is a Scottish Rite Mason and a Shriner. He enjoys fishing, horseback riding and target practice with the pistol.

Dr. Martin Van Patten

Dr. Martin Van Patten was born in Sioux City, Iowa, January 9, 1911. His parents died when he was a child and he was raised by his uncle, E. M. Van Patten, in Fort Dodge. He attended the grade and high schools here and after graduating from the high school entered the Junior College and attended two years. He then went to Grinnell, Iowa, for three years, and entered the Medical Department of the State University in Iowa City, from which he was graduated in 1938. He interned at St. Luke's Hospital in Duluth, Minnesota, and entered the practice of medicine in Fort Dodge in association with Dr. E. F. Beeh. Although he was raised by his uncle, an osteopath, he studied regular medicine, which speaks very well for both him and his uncle. He still has his spurs to win, but his prospects are good and he is a very fine young man.

(To be continued next month)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD— By William E. Ladd, M.D., professor of child surgery; and Robert E. Gross, M.D., associate in surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

ACCIDENTAL INJURIES—By Henry H. Kessler, M.D., attending orthopedic surgeon, Newark City Hospital. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1941. Price, \$10.00.

ARTHRITIS IN MODERN PRACTICE—By Otto Steinbrocker, M.D., assistant attending physician, Arthritis Clinic, Bellevue Hospital. W. B. Saunders Company, Philadelphia, 1942. Price, \$8.00.

CARDIAC CLASSICS—By Fredrick A. Willius, M.D., and Thomas E. Keys, M.D., The Mayo Clinic. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

CLINICAL HEMATOLOGY—By Maxwell M. Wintrobe, M.D., associate in medicine, Johns Hopkins University. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

HEMORRHAGIC DISEASES—By Kaare K. Nygaard, M.D., former fellow in surgery, The Mayo Foundation. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

INFANTILE PARALYSIS—A Symposium Delivered at Vanderbilt University in April, 1941. Published by the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York. Price, \$1.25.

MEDICAL CLINICS OF NORTH AMERICA, November, 1941, Military Medicine—W. B. Saunders Company, Philadelphia, 1941. Price, \$12.00.

RHEUMATIC FEVER IN NEW HAVEN—Edited by John R. Paul, M.D., professor of preventive medicine, Yale University School of Medicine. Science Press Printing Company, Lancaster, Pennsylvania, 1941. Distributed by the Milbank Memorial Fund, 40 Wall Street, New York. Price, \$1.00.

TECHNIC OF CONTRACEPTION CONTROL—By Robert L. Dickinson, M.D., and W. E. Morris, M.D. The Williams and Wilkins Company, Baltimore, 1941. Price, fifty cents.

TEXTBOOK OF PEDIATRICS—By J. P. Crozer Griffith, M.D., emeritus professor of pediatrics, University of Pennsylvania; and A. Graeme Mitchell, M.D., professor of pediatrics, University of Cincinnati. Third edition, revised and reset. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

THE MARCH OF MEDICINE, New York Academy of Medicine Lectures to the Laity, 1941—Columbia University Press, Morningside Heights, New York, 1941. Price, \$2.00.

THE NEW INTERNATIONAL CLINICS, Volume IV, New Series Four—Edited by George M. Piersol, M.D., professor of medicine, Graduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1941.

THE 1941 YEAR BOOK OF PEDIATRICS—Edited by Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

THE 1941 YEAR BOOK OF INDUSTRIAL AND ORTHOPEDIC SURGERY—Edited by Charles F. Painter, M.D., orthopedic surgeon to the Massachusetts Women's Hospital, Boston. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

BOOK REVIEWS

AN INTRODUCTION TO MEDICAL SCIENCE

By William Boyd, M.D., professor of pathology and bacteriology, University of Toronto. Second edition. Lea and Febiger, Philadelphia, 1941. Price, \$3.50.

Here is a book which has correlated anatomy, physiology, bacteriology, *materia medica*, chemistry and nutrition into one picture—the patient. It is a brief survey so clearly written that the young nurse finds it comprehensive and fascinating as well as clarifying.

To the one who is seeking a general review of medical nursing this book will prove recreational as well as informative. It is a compilation of the essential facts from a large field of medicine, elementary enough for the freshman student without the confusion of burdensome detail. It incorporates all of the basic medical subjects and touches every branch of medicine except diseases of the eye, ear, nose and throat.

Part I covers such general principles as tissue constituents, activities and functions; periodical development of medical science; disturbances due to vitamin deficiency; immunity and allergy; life cycle of the most prevalent animal parasites; inflammation; hemorrhage; and ischemia. Part II presents the various organs and tissues with their related diseases. Part III deals with the communicable diseases and with those laboratory tests and techniques which are of special interest and value to a nurse.

As a textbook in conjunction with medical nursing the student should find this a helpful and stimulating book. It is definitely written for the young student

A. A. H. (R.N.)

TECHNIC OF CONTRACEPTION CONTROL

By Robert L. Dickinson, M.D., and W. E. Morris, M.D. The Williams and Wilkins Company, Baltimore, 1941. Price, 50 cents.

This small booklet adequately explains the modern concepts of contraception. The matter is presented in such a way that the pamphlet can be recommended for use by the layman. It also will be of considerable value to the physician who is not acquainted with the usual accepted contraceptive procedures.

A. W. B.

DISEASES OF WOMEN

By Harry S. Crossen, M.D., professor emeritus of clinical gynecology, Washington University School of Medicine; and Robert J. Crossen, M.D., assistant professor of clinical gynecology and obstetrics, Washington University School of Medicine. Ninth edition, entirely revised and reset. The C. V. Mosby Company, St. Louis, 1941. Price, \$12.50.

This new edition of an already outstanding gynecologic text has many features to recommend it. The text has been almost completely rewritten and a definite effort has been made to present the subject material in the most practical manner. Many chapters, particularly those concerning the endocrines, hormones and genital cancer have been enlarged in keeping with the tremendous interest stimulated in these fields. These chapters are made even more

valuable by the generous use of illustrations and photomicrographs. The chapter on gynecologic treatment measures presents a table of the current hormonal products which may be of considerable value to the practitioner who is only casually familiar with these preparations.

Throughout the book the authors have made a consistent effort to place the proper emphasis on the practical points in gynecologic examination and treatment which the practitioner will find useful in the everyday practice of medicine.

A. W. B.

ARTHRITIS IN MODERN PRACTICE

By Otto Steinbrocker, M.D., assistant attending physician, Arthritis Clinic, Bellevue Hospital. W. B. Saunders Company, Philadelphia, 1941. Price, \$8.00.

This book treats the subject in an excellent manner. It is beautifully written and outlined. The various forms of arthritis are taken up as well as the other common conditions seen in general practice, such as, the painful shoulder, backache, painful feet and the common condition of fibrosis.

At the beginning of each chapter is an outline of its contents. Only the more practical material is discussed in a concise manner. The author has much to say about treatment including all the newer methods which have proved successful in his clinic.

This is a most excellent and practical volume on this subject and will be of immense value to the general physician who daily encounters these various types of cases.

E. E. K.

ESSENTIALS OF ELECTROCARDIOGRAPHY

By Richard Ashman, Ph.D., professor of physiology, and Edgar Hull, M.D., professor of medicine, Louisiana State University Medical School. Second edition. The Macmillan Company, New York, 1941. Price, \$5.00.

In the preface the authors assert that their aim is to present a text on electrocardiography which gives both the theoretic and practical essentials of the electrocardiogram. This they have accomplished in an excellent manner.

In the second chapter, the relevant aspects of cardiac anatomy and physiology are presented with clarity and conciseness. The two following chapters are concerned with the physical and physiologic basis of the electrocardiogram, and give one an excellent understanding of the present-day concepts of the theory of electrocardiography. The diagrams in this section would have been more valuable if the format of the book had been changed to allow for larger pages with the result that more of the text would appear on the pages with their re-

lated illustrations. The chapters on the electrocardiogram in diseases of the heart present the subject in a conservative manner. The illustrations are ample and well reproduced. They emphasize that a single electrocardiogram should not be relied upon in the diagnosis of coronary disease, but that progressive changes are essential. The modern views of coronary insufficiency and the various methods of producing characteristic electrocardiographic changes are discussed. The borderline electrocardiogram is mentioned briefly.

This book can be highly recommended to any one interested in electrocardiography. H. W. R.

EYE HAZARDS IN INDUSTRY

By Louis Resnick. Published for the National Society for the Prevention of Blindness, Columbia University Press, New York, 1941. Price, \$3.50.

This work represents a very thorough and complete analysis of the eye problem in industry. Many statistics are given, some surprising, showing the frequency and severe consequences of industrial eye accidents. The tremendous financial losses to the employer, employee, community and state are stressed.

A detailed consideration of the contributing factors is given under such headings as eye accidents, eye diseases, defective vision and poor lighting conditions. Even more attention is given to the solution of the problem: mechanical guards and goggles; an efficient and up-to-date first aid organization, with competent ophthalmologic follow-up; proper lighting conditions; and education of the employee as to his responsibility.

This book should be in the hands of all safety engineers, industrial physicians and ophthalmologists.

S. A. B.

TREATMENT OF THE PATIENT PAST FIFTY

By Ernst P. Boas, M.D., assistant clinical professor of medicine, Columbia University. The Year Book Publishers, Chicago, 1941. Price, \$4.00.

Due to the increase in longevity of the American population and an increase in the proportion of the physician's practice among the middle-aged and aging, a book on this subject is very timely. This text is recommended as being practical and concise, eliminating unnecessary references and historical facts. The diseases considered are those which are common to the latter half of life. Not all the diseases described are confined to advanced life, nor are all ills that affect the aged discussed.

Dr. Boas has succeeded in his aim to prepare a volume to give the physician a greater understanding of the psychologic and physical involutional changes which take place in aging persons and to assist him in the management of these patients. M. J. R.

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No. 6

THE PRESIDENT'S ADDRESS*

EARL B. BUSH, M.D., Ames

Apologetically and with humility, it is my pleasure to follow the custom long established in the Iowa State Medical Society to address this assembly. In casting about for pertinent remarks, I feel sure a discussion covering the important part organized medicine must take in the war that has been so precipitously thrust upon our country, will afford an interesting subject. For the past two years the War Department has been working indefatigably, anticipating that this country would soon be engaged in war. Since World War I our country has been in a dilemma. Pacifists, advocates of peace and many well-thinking people had gained control of and influenced our governmental procedure and advocated that this country disarm in a magnificent peace gesture before the world. During 1940 it became apparent to our Congress that our peace policy was no longer feasible and our only hope in maintaining our rights of freedom would be to arm rapidly; the original propaganda used was that a defensive position would be established in this country. Transpiring events soon convinced our lawmakers of the fallacy of this position, and about August, 1940, our first efforts to raise an army were begun. Each succeeding month these efforts were magnified. Appropriations were made by the Congress to produce munitions of all classes—in effect, preparing for war. The National Guard was ordered into active training. The Selective Service Act became law and the selected soldiers were classified and forwarded to the training camps. In 1941, our country, watching the dire plight of England, with her back against the wall, being bombed daily with devastating effect, adopted a policy in full support of those nations belligerent against the Axis Powers.

Early in the defensive efforts of this government, conferences between the War Department and the American Medical Association resulted in a plan adopted by your association proposing an

immediate medical preparedness program. You are all familiar with the provisions of this plan, which specifies that organized medicine shall voluntarily furnish the army of the United States with adequate medical officer personnel. There are approximately 180,000 practicing physicians and surgeons in the United States. The present day tables of organization of the United States Army require six and one-half medical officers for 1,000 soldiers. For each million soldiers in our army there must be 6,500 medical officers. In computing the figures for anticipated armies to be used by our government in this war, it is apparent that the medical profession faces a serious problem in furnishing able-bodied, young, capable doctors sufficient in numbers to officer our army. A total of 52,000 medical officers will be needed when we muster into service eight million soldiers. The present age limit will take just about all the doctors under the age of forty-five years who are able-bodied, and I would like to add here that the medical officer who is chosen to do field work will have to meet a very high physical standard, because the demands of modern warfare on physical endurance eliminate all but the very best. I am not permitted to give definite figures on the present size of our army, nor can I estimate the approximate number of doctors already on duty, but I can safely say, without divulging confidential information, that organized medicine so far is meeting the demands of the War Department adequately, and I am quite sure that the program we are at present following will provide sufficient medical service for the army, although it is going to create, in many localities, a definite deficiency in some of the special fields. By close cooperation with our Medical Preparedness Committee, we hope to supply satisfactory medical service to our normal civilian constituents and to vital war industries.

Urban and rural doctors in Iowa are distributed so generally that I feel sure those individuals remaining at home, either by reason of physical disqualification or age, with a few changes in location will be able to care for our people. The distribu-

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

tion of surgeons, internists and specialists may have to be changed in some instances to serve properly Iowa's two and one-half million people. Fortunately the members of our profession are responding one hundred per cent to our preparedness program. While there have been some confusion and anxiety, our members are loyal and are doing their part.

During the past few months our government has appointed a Procurement and Assignment Committee, a new agency which will have full charge of all procuring and assigning of medical, dental and veterinary officers. This committee is headed by an officer of the regular Army Medical Corps, Major Seeley, who has been invaluable in the liaison between the government agencies and the American Medical Association Preparedness Committee in all our efforts to tabulate and classify properly all available doctors. Our present status is satisfactory and no changes are anticipated that would create a government action necessitating drafting the members of our profession into service.

It is my earnest desire that all our members wholeheartedly appreciate the wonderful opportunity afforded organized medicine to provide the medical service required in this stupendous war effort of the United States and her allies. I am looking toward the future when I point out to you the moral effect our response will have on our people. Already political influences are becoming more evident, and in our daily ministrations to the public, suggestive inferences are being made that would deprive us of the opportunity to make our legitimate fee charges. It is my hope that the conduct of our great profession will in a large measure circumvent influences that would subjugate our professional efforts, creating a system of state or government medical care generally, on a miserly salary basis for our members. I hope that when this war effort is finished our members will all insist upon returning to their regular functioning status. Further, I hope that none will be lured by salaries or other inducements into joining any government controlled agency which would be to the disadvantage of the nation we serve and the medical profession at large, which desires to retain its normal practice and function.

In conclusion, I want to express my deepest appreciation and gratitude to all members of the Iowa State Medical Society for the splendid and gracious cooperation afforded me in my efforts as your servant and president during the past year. It is my fervent prayer that we may all join firm hands in an everlasting unanimity with a steadfast and unfailing desire to do our utmost to support our country in her hour of need.

THE PRESIDENT ELECT'S ADDRESS*

FRANK P. WINKLER, M.D., Sibley

The medical profession throughout the ages has been looked upon as possessing the highest quality and nobility of purpose. Men and women admitted to the profession wholeheartedly devoted themselves to the care of the sick. The requirements for admission were rigid and inflexible, demanding qualities of character consistent with such a high calling.

In rendering service to humanity, the outstanding characteristic of physicians has been that of self-sacrifice; the same spirit that urged them to enter the profession lives constantly in their daily lives. Each generation of physicians has added to the total of scientific knowledge which has advanced the professional service to its present high level. The free exchange of scientific knowledge by members of the profession has constantly raised the standards of medicine throughout the world.

It is unthinkable for the true physician to retain or repress scientific knowledge which he has gained through research in the laboratory, or by the art of medical practice. This desire to render unselfish service has made the profession aware of its problems, its responsibilities and its duties. The profession of this great state of Iowa, and of all the other states, has been constantly striving to elevate the standards. As a result of this improvement in medical practice in this country, the span of life has been nearly doubled, increasing from thirty-five years to sixty-two years during the half century just passed.

In spite of the quality of service rendered to the people of this country by our profession, in spite of the self-sacrifices made, and the interest in maintaining a high level of health, efforts have been made to create in the public mind a distrust of its purposes. A concerted effort has been made to raise a doubt in the mind of the public that the profession, in some way or other, has failed, that the health of the public resting in its hands for centuries has been misplaced, and that the interest of the profession has been solely economic.

The treatment of diseases is not wholly a matter of administering pills. Today before treatment can be administered, a thorough and complete diagnosis is necessary. This requires an exhaustive study of the patient as a whole: his personality, his problems and his physical complaints. The destruction of the confidence of the patient in his physician by the creation of doubt as to his ability and honesty often results in failure to accomplish what is necessary.

It is contended by those who are interested in

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

changing the present medical status in this country, that the present system of medical practice is inadequate to care for many of the sick; especially those in underprivileged classes and those who might hesitate to incur medical expenses. It is intimated by the opponents of the present medical system of practice that the profession is unable to comprehend general trends and, therefore, is not properly equipping itself to meet these problems. They maintain that a changing economic system requires a different type of medical practice. The proponents of this new system contend that the profession is not competent, or not adequately equipped to assume these new responsibilities.

The state, under cover of political advancement, has been trying to substitute bureau management. Social enthusiasts have argued that the present distribution of medical services in this country is inadequate. There may be certain weaknesses in our present form of practice; but they fall far short of the defects of medicine practiced under some form of *ism*, or the social and all politically minded propagandists.

Let us make a survey of the accomplishments of organized medicine and see if we have measured up to the requirements and demands upon us by the public. In recent studies, it was revealed that the medical profession donates more than one million dollars a day in services to indigent medical patients; and that medical services, without charge to patients, were rendered to millions annually. It was further shown that medical service was available for ninety-five per cent of the patients needing and deserving our services.

The education of the physician does not stop when his interne service is completed, or when he has passed the state or national examining boards. The American Medical Association, and especially the Iowa State Medical Society through its Speakers Bureau, has for many years arranged postgraduate courses in every part of the state. In this way it has been possible to continue the education of the new physicians, as well as the older practitioners who have been less privileged.

During my own service as Councilor of the Iowa State Medical Society, I have seen post-graduate and refresher courses, as well as clinics of various kinds, carried to almost every county in the state; and this service is extended as the years go on. These supervised medical educational plans, together with those sponsored by many of our universities and colleges and the publications of the best medical and surgical journals in the world, constantly assist the profession in improving itself, and in maintaining contact with the developments in medical science, so that it may keep abreast of all advancements in medicine.

During peace or war, it is necessary that adequately trained physicians be available to all. The first line of defense in modern warfare is medical defense. The present peace-time procurement program for the army personnel calls for six and one-half physicians for each 1,000 men in uniform. The American Medical Association in June, 1940, took the lead of all organizations in making a survey of its members, cataloguing them as to age, specialty, qualifications, experience and availability, with the intention of establishing a bureau or clearing house for physicians in time of any emergency.

It should be a matter of pride to you that from our own state of Iowa, ninety-nine per cent of the physicians have completed and sent in their personal reports or questionnaires. However, let me call your attention to the fact that even now when medicine is trying to do its part in a very urgent preparedness program in the care of the sick and injured, its leaders are again humiliated, and the American Medical Association is being hampered through legal actions classifying medicine as a trust.

At the present time there are 6,500 Selective Service Boards functioning with 18,000 physicians serving on these Boards, all of them volunteers, not a one of them drafted, serving freely without a cent of remuneration. Surely this is a patriotic service in a great preparedness effort for our nation.

The medical profession, as a body and almost every member thereof, is at your call ready to serve in any capacity for which it is qualified by training and experience, to render unending ministrations to those having need for their service. The outstanding responsibility of any physician and in fact the reason for his existence, is to make sick people well; and for those who cannot get well, to make the rest of the journey as easy and as comfortable as is humanly possible.

American Medical Association National Convention

—
Atlantic City, New Jersey

June 8-12, 1942

FIELD STUDIES OF TUBERCULOSIS IN IOWA*

BYRON J. OLSON, M.D., Washington, D. C.
Surgeon, United States Public Health Service
and

CHARLES K. McCARTHY, M.D., Des Moines
State Department of Health

It is desired to present here an outline of a study of tuberculosis which is now being carried out in this state. This is a cooperative study between the Iowa State Department of Health, the Iowa State Tuberculosis Association and the National Institute of Health of the United States Public Health Service. The reasons for and the objectives of this study are best explained by a brief review of certain observations recently made on the epidemiology of tuberculosis.

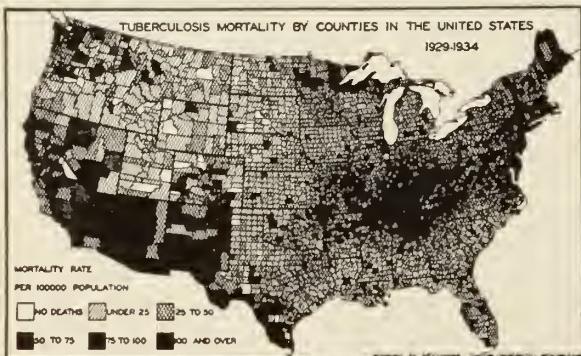


Fig. 1. Map showing tuberculosis mortality by counties in the white population of the United States, 1929-1934.

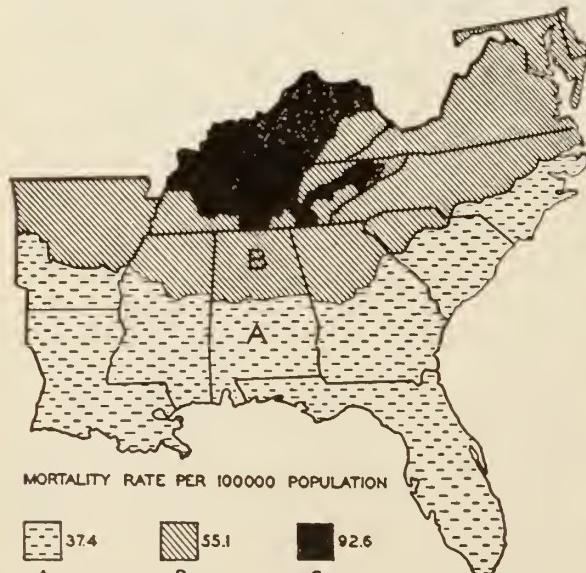


Fig. 2. Average annual death rates from tuberculosis (all forms) among white persons in arbitrarily defined regions of thirteen states, 1929-1933.

In 1936, the United States Public Health Service initiated certain field studies of tuberculosis in

the southeastern part of the United States.¹ The reason for the selection of this area for study is evident from the following map. (Figure 1.) This map reveals that an area of high mortality from tuberculosis has been reported in the Appalachian region of the eastern United States

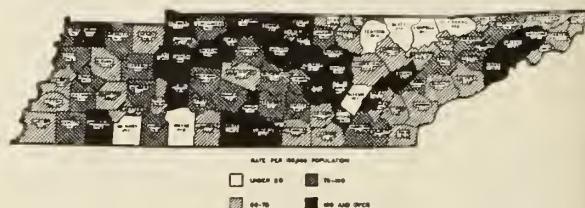


Fig. 3. Average annual death rates from tuberculosis (all forms) among white persons in counties of Tennessee, 1929-1933.

and that the mortality rates decline both north and south of this area of high mortality. Figure 2 shows three arbitrarily defined "zones of death rates" from tuberculosis in this area and gives a general picture of the geographic variation in mortality in the southeastern United States. A detailed map of the state of Alabama follows. (Figure 4.) It is seen from this map that the

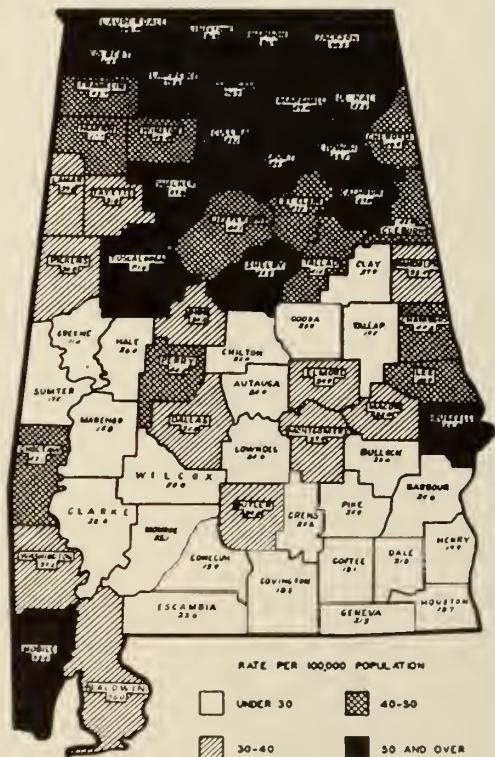


Fig. 4. Average annual death rates from tuberculosis (all forms) among white persons in counties of Alabama, 1929-1933.

mortality rate, 120.3, from tuberculosis is high in and adjacent to Giles County, Tennessee. The following map of Alabama, Figure 4, shows that as you proceed south from the northern boundary the mortality declines county by county to

* Presented before the Iowa Tuberculosis Association, Sioux City, March 27, 1942.

the southern boundary of Alabama; a rate of 13.1 per 100,000 occurring in Coffee County.

A study of many factors which might explain this geographic distribution of mortality has been carried out, the first step in this work being an exhaustive attempt to verify or, if necessary, correct the reported death rates. To date, the evidence suggests that the geographic variation in mortality from tuberculosis in this region is essentially correct. Following this investigation, factors such as economic conditions, social customs, environmental sanitation and the nutrition of the population have been studied but to date the results from these studies have offered no readily apparent reasons for the variation in death rates from tuberculosis between the two areas.

Studies of household associates of sputum positive cases of tuberculosis, using the technic of the late Dr. W. H. Frost⁴, have suggested that tuberculosis tends to spread less in the households of a sputum positive case of tuberculosis in south Alabama in and adjacent to Coffee County, Alabama, than in households in central Tennessee in and adjacent to Giles County, Tennessee. This raises a number of interesting questions, one of which is whether or not the geographic variation in death rates from tuberculosis might be related to a corresponding variation in household attack rates from the disease. This finding has a direct application to our present study in Iowa.

The following map, Figure 5 shows death rates from tuberculosis in Iowa and three adjacent states. From this it is noted that Iowa has the

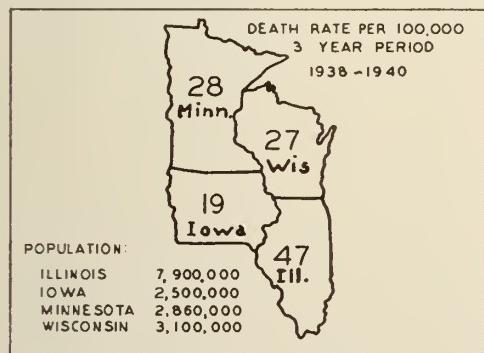


Fig. 5. Average annual death rates from tuberculosis (all forms) for four states.

lowest reported mortality from tuberculosis of any of these states. The death rate from tuberculosis, all forms, of Iowa is given in more detail in the following map, Figure 6. From the map it is seen that the average death rate by counties (deaths allocated by residence) for the three-year period from 1938 to 1940, varies considerably. The detailed distribution of counties

in terms of this three-year average annual death rate (resident deaths) for the years 1938 to 1940 is as follows:

Under 10 per 100,000.....	18 counties
11 - 20 per 100,000.....	61 counties
21 and over per 100,000....	20 counties

Thus 79 (79.8%) of the counties of Iowa have a death rate equal to or lower than the state average. Of these counties, eighteen have a death rate which is only about one-half that for the state as a whole. Twenty counties (20.2%) have average annual death rates above the aver-

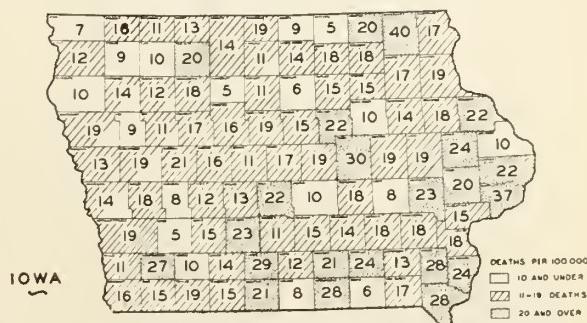


Fig. 6. Average annual death rate per 100,000 population by counties from tuberculosis (all forms) for three-year period from 1938 to 1940.

age of the state. From preliminary studies, there is no readily apparent reason for this variation in death rates by counties within the state.

The following graph shows this distribution of death rates by county populations, Figure 7. From this graph it is evident that the death rate from all forms of tuberculosis does not vary in any important way with the size of the population of the counties reporting the respective rates. The question of the accuracy of death rates from tuberculosis is complicated. However, pending

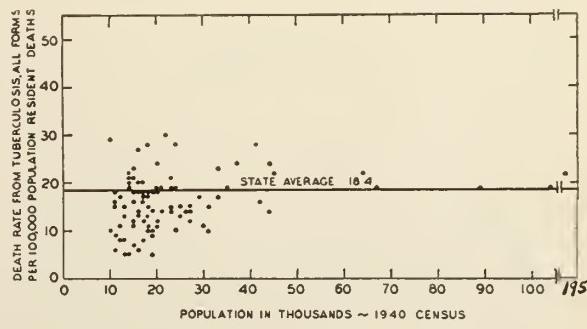


Fig. 7. Distribution of death rates by county populations.

the results of a detailed field investigation, no important evidence has appeared which would discredit these death rates.

One objective of the present cooperative field study will be to gather further information on the reliability of the reported death rates and to de-

termine if the death rates in the various counties studied are paralleled by a corresponding variation in household attack rates. A second objective of this study relates to the problem of pulmonary calcification. Field studies, particularly in the southeastern United States,^{5 and 6} have revealed a marked geographic variation in the occurrence of pulmonary calcification. In a study of school children in twenty counties of five states¹ the

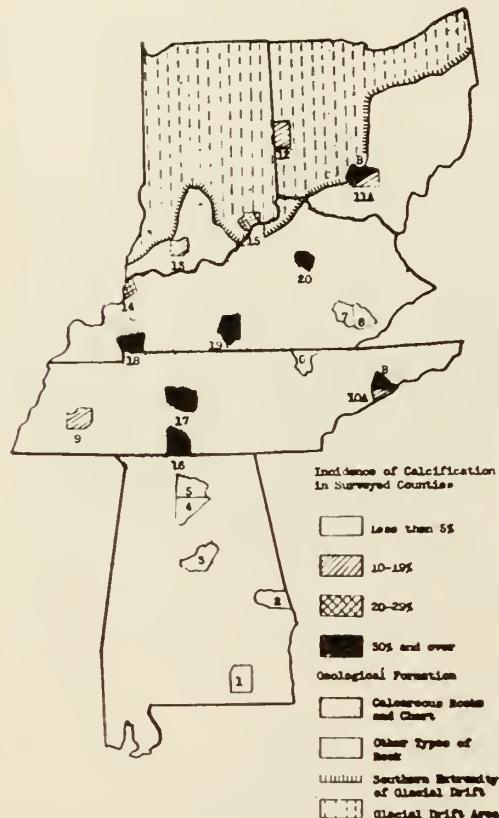


Fig. 8. Incidence of calcified lesions in white children in twenty counties of five states related to geographic variation.

geographic variation in occurrence of pulmonary calcification has been well demonstrated. Figure 8 shows the results of this study. It is noted from this map that there are marked differences in the incidence of pulmonary calcification both between states and within a given state.

Within the past year field studies of pulmonary calcification in Ross County, Ohio⁷ could not demonstrate that this pulmonary calcification occurring in rural households was related to tuberculosis. This conclusion was based on a study of 279 present household associates in 44 households; 256 were x-rayed and 125 (49.4%) were found to have one or more pulmonary calcifications. This county had a death rate of 24.6 per 100,000 in 1939.

Preliminary review of x-ray results obtained in the Iowa case-finding program suggests that in

Iowa a considerable amount of pulmonary calcification occurs. The exact incidence is not known but is now being determined. The importance of determining the relation of pulmonary calcification to tuberculosis or to other possible etiologies such as ascariasis, etc., is not to be underestimated. This pulmonary calcification is commonly called childhood type tuberculosis and there is now evidence that many of these pulmonary calcifications found in children and adults may be unrelated to tuberculosis.

The state of Iowa presents an interesting field of work on tuberculosis from two standpoints, both inter-related. It has an unusually low reported death rate from tuberculosis which is difficult to explain. It appears to have an unusually high rate of pulmonary calcification based on present evidence; the precise incidence of this pulmonary calcification is now being determined. The plan of study in Iowa consists of an x-ray and tuberculin survey of one rural school with 200 to 250 pupils in each of six selected counties. These counties are selected on the basis of the following points:

1. Resident death rate from tuberculosis.
2. Geologic formations characteristic of those occurring in the state.

The selection was made with the help of the interested groups. Mr. A. H. Wieters, director of Public Health Engineering of the Iowa State Department of Health, aided particularly in selecting counties in terms of geology. The following counties have been selected and are now having the preliminary x-rays of a school of that county: Decatur, Fremont, Hardin, Iowa, Van Buren and Winneshiek.

Following the analysis of results of this x-ray and tuberculin survey, the final phase of the study will be a detailed epidemiologic study of households in the county or counties selected. This will consist of a study of :

1. Households in which a child has a pulmonary calcification and is tuberculin negative.
2. Households in which a child has a pulmonary calcification and is tuberculin positive.
3. Households in which a child has a negative x-ray and a positive tuberculin test.
4. Households in which a child has a negative x-ray and a negative tuberculin test.
5. Households in which there is a known sputum positive or x-ray positive case of tuberculosis.

All household associates in the households studied should be x-rayed and tuberculin tested. Detailed household histories will be obtained. Stool samples will be obtained from members and

studied for parasites. Soil samples will be obtained adjacent to the house and studied for parasites. The families will be asked to cooperate after permission to study the family has been given by the family physician. All reports on individuals will be confidential and sent to the family physician designated.

The success of this study is dependent on the cooperation of the family physicians, on the co-operation of the public and that of the interested agencies, both official and unofficial. The Director of Tuberculosis of the State Department of Health has received most excellent cooperation in obtaining the school x-rays and tuberculin tests from all interested groups. The county medical societies, various boards of education and principals of schools in the study counties are to be thanked for their generous support and attitude toward this work. This study, as has been pointed out, is not merely a local survey, but rather a research study of a problem of national importance. It is felt that conditions in the state of Iowa offer a particularly fine opportunity for the study of this important aspect of tuberculosis.

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FLUID THERAPY IN PEDIATRICS*

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The use of fluids is of particular importance in the field of pediatrics because children and especially infants may so readily become dehydrated. Changes in the water metabolism of the body are commonly associated with diarrhea, vomiting, fever and infections.

CLINICAL PICTURE

Dehydration from whatever cause, such as acute infections, vomiting, diarrhea or extensive burns, results in a characteristic clinical picture. The child is restless, irritable and finally becomes semi-stuporous. The skin has an ashen gray color, has lost its turgor and feels dry. The eyes are sunken. At first the child is markedly thirsty but later he

vomits all foods and fluids offered by mouth. In the early stage of dehydration there are no characteristic laboratory findings because the circulating volume of fluid is not impaired. Later, the increased white and red blood cell counts and the elevation of hemoglobin levels signify a concentration of blood due to loss of fluid.

PATHOLOGIC PHYSIOLOGY

For a rational therapeutic approach to the fluid requirements of the body the water content of the body may be divided into two physiologic compartments; the extracellular and the intracellular. The extracellular compartment which includes blood plasma, lymph, cerebrospinal fluid and interstitial fluid constitutes about 20 per cent of the body weight in adults. The proportion of body weight due to extracellular water at birth is more than double the amount found in an adult. Intracellular fluid which exists within the cells as a part of the cell protoplasm, makes up about 50 per cent of the body weight.

Chemically, there are marked differences between the extracellular and intracellular compartments. The characteristic feature of extracellular fluids is that they contain large amounts of chloride sodium and bicarbonate but small amounts of potassium, magnesium and phosphates. Intracellular fluid, however, contains most of the potassium, magnesium, phosphates and protein of the body. The relation of these substances in the intracellular compartment is strikingly constant. This constant relationship persists in fever, starvation and even after loss of considerable extracellular electrolytes and fluid. The exchange of water and the electrolytes, sodium, chloride and potassium, between the extracellular and intracellular compartments is regulated by osmotic pressure. Since the capillary walls are freely permeable to all crystalloids and inorganic ions but are relatively impermeable to the plasma colloids, the fluid balance is maintained by constant transfer of water from the side of the lower to the side of the higher osmotic pressure.

Changes in the acid-base equilibrium of the serum may result from loss of extracellular water and electrolytes. If the loss of sodium is greater than the loss of chloride there is relatively less sodium available to form bicarbonate. The excess carbonate exists as carbonic acid and results in an acidosis. Conversely, with a greater loss of chloride than of sodium there is an increased concentration of bicarbonate or an alkalosis. Such a condition may frequently result from continuous vomiting due to loss of chloride in the gastric juice.

The pathologic variations in the physiology of water metabolism depends upon the degree of de-

*Presented before the Iowa State Pediatric Society, Des Moines, April 14, 1942.

hydration. In the early stage the interstitial fluid serves as an adjustable segment and only a small amount of the reservoir fluid and electrolytes is withdrawn. As the dehydration is increased the reservoir is further depleted causing drainage from the intracellular compartment in order to maintain blood volume. All types of marked dehydration are associated with shock. Shock results from loss of plasma proteins which may be caused by depletion of extracellular electrolytes at the site of a traumatic injury or burn. It is in this later stage that the blood cells are concentrated, the hemoglobin levels elevated and the plasma proteins depleted.

CORRECTION OF DEHYDRATION

Whatever the cause of the dehydration fluids are needed to rehydrate the patient. Since little or no fluid can be tolerated by mouth the various forms of parenteral therapy are indicated. The type of fluid selected and the method of administration will depend upon the condition of the patient. Physiologic saline is used to replace the electrolytes lost in the extracellular fluid. Lactate-Ringer's solution has the added advantage of containing all the electrolytes of body fluids. After absorption the sodium lactate is metabolized and converted into sodium bicarbonate. This type of solution is indicated in conditions of acidosis. Dextrose either in physiologic saline or lactate-Ringer's solution is given for the food value and for the antiketogenic effect in ketosis. Blood transfusions seem to increase the patient's resistance to infection, correct anemic conditions, improve nutrition and restore blood volume. Transfusions are best given after the stage of acute dehydration has been corrected by other parenteral fluids. An exception is the primary use of plasma transfusions in the treatment of extensive burns.

Blood transfusions have been placed on a safe and rational basis with the development of knowledge regarding asepsis, blood coagulation, blood groupings and cross matching. In 1921 the American Medical Association accepted the Jansky method of blood grouping. However, there are three methods of blood grouping in general use: Jansky, Moss and the International or Landsteiner. The Moss grouping transposes Group I and Group IV of the Jansky classification. The chief requisite for compatibility of blood is that the blood corpuscles of the donor are not agglutinated by the serum of the recipient. However, since other iso-agglutinins exist which may lead to severe reactions, cross matching of the donor's corpuscles and the recipient's serum and of the donor's serum and the recipient's corpuscles is essential. Blood for transfusions may be given immediately after withdrawal from the donor or

several weeks later if it has been preserved in a blood bank. Plasma likewise may be obtained from plasma banks. Indirect transfusions, with citrated blood, are apparently as effective as direct transfusions. Ten cubic centimeters of a 2.5 per cent sodium citrate solution per 100 cubic centimeters of blood will prevent coagulation of the blood but will not cause citrate reactions.

The amount of parenteral fluids used will depend upon the route of injections. From 30 to 40 cubic centimeters per pound per day may be given subcutaneously. Intravenous fluids, physiologic saline, lactate-Ringer's, dextrose, plasma or blood may be given up to ten to fifteen cubic centimeters per pound per day. The rate of injections of intravenous fluids is as important as the volume of fluid given; from three to five cubic centimeters per pound per minute is the rate recommended.

TECHNIC OF ADMINISTRATION

The technic of giving intravenous fluids is the same whatever the solution. The one indication for choice of a particular vein is its accessibility. The accessibility of veins may vary in different age groups. In infants the superficial veins of the scalp are frequently the most desirable. The firm surface of the skull gives support to the needle. In older children the veins in the antecubital fossa, the dorsum of the foot or hand, mesial and lateral aspect of the foot, the external jugular veins and the femoral veins may be used. Although blood may be readily aspirated from the longitudinal sinus the giving of fluids by this route will produce serious complications if any leaks out over the cortex of the brain.

After selection of the vein an important technical step is the immobilization of the child. If a scalp vein is to be used the child is "mummied" and the head stabilized by attaching wide strips of adhesive tape from the head to sand bags placed on either side of the head. In a similar manner an arm or leg may be immobilized.

One inch to one and one-half inch length needles from 25 to 20 gauge have been found to be the most satisfactory. The bevel may be filed to suit the operator; usually a short bevel needle is more acceptable than a long bevel needle. Entrance to a small vein is facilitated by use of the selected needle fitted to a two cubic centimeter syringe which has been filled with normal saline lactate-Ringer's solution. After the needle is inserted into the vein the fluid is slowly injected; if the needle is within the lumen of the vein there is no swelling of the tissues. It is easier to determine successful entrance into a small vein by injecting fluid than by aspirating blood into the syringe. When the needle has been firmly inserted into the vein, the syringe is removed and an adaptor at-

tached to a small caliber tubing is fitted into the needle. This extra tubing allows for movement of the head or extremity without jeopardizing the position of the needle within the vein.

CASE REPORTS

Case 1. M. P., a thirteen-day old female infant weighing five pounds, four ounces was admitted to the Iowa Lutheran Hospital on October 10, 1941, because of diarrhea and dehydration. This baby was born in another hospital during a widespread infection throughout the hospital nursery. All of the nursery infants had a long protracted siege of diarrhea. There was one fatality. This child had been suffering from a diarrhea of moderate severity and had been started on a powdered protein milk formula plus sulfaguanidine and subcutaneous fluids. Nevertheless the diarrhea continued and nine days after admission the child's condition became critical. Following the use of intravenous fluids, both lactate-Ringer's solution and citrated blood, the child showed definite improvement in four days.

In the fourth week of hospitalization the child was again in a critical condition. The subcutaneous tissue of the back was undermined by abscessed pockets, the result of repeated subcutaneous injections, which required multiple drains. Following a period of surgical drainage and intravenous fluids, citrated blood, lactate-Ringer's and five per cent dextrose solutions, the child again made a gradual improvement and weighed six pounds, thirteen ounces when discharged from the hospital.

During the fifty-three-day period of hospitalization this child received parenteral fluids by the following routes; 34 subcutaneous injections, 12 intravenous lactate-Ringer's or five per cent dextrose solutions, and five indirect citrated blood transfusions. Subcutaneous abscesses, ranging in number from two to eight at any one time were drained during a four-week interval. There was considerable juggling of formulas depending upon the patient's condition throughout the period of hospitalization.

Analysis of this case suggests several ways in which the treatment might have been more effective. In the first place the gravity of the child's condition was not appreciated at the time of admission. The patient might have made a quicker clinical response if a period of starvation had been started immediately and the water needs of the body met by use of parenteral fluids. Even though intravenous fluids were difficult to administer they should have been started earlier. Supplementary fluid via subcutaneous injections should have been given by gravity rather than by force. It seems probable that the subcutaneous abscesses were

caused by a combination of factors, such as many different operators, faulty technic and the forceful injections of relatively large amounts of fluids in an undernourished infant.

Case 2. J. K., an eighteen-day old male infant was admitted to the Iowa Lutheran Hospital on December 9, 1941, because of severe dehydration. The child weighed seven pounds, eight ounces at birth and appeared normal until one day of age when right-sided jerky movements developed. By the third day the jerky movements were bilateral. Jaundice was noticed on the second day which increased in intensity throughout the first week. The child's condition was felt to be due to a cerebral hemorrhage and bromide medication was given to control the jerky movements. The child refused breast feeding and took small amounts of formula reluctantly. Two days before admission to the hospital he developed fever and rapid respirations.

The child was admitted to the hospital in a moribund condition and at eighteen days was one pound under his birth weight. He was gasping for air, the skin was jaundiced, without turgor and lay in folds. There were several large blebs over the back. The blood findings of 88 per cent hemoglobin, 4,250,000 red blood cells and 16,850 white blood cells were considered to be relatively high due to the extreme dehydration. The child was given intravenous lactate-Ringer's solution to increase the blood volume which was immediately followed by a small transfusion of citrated blood. These procedures were repeated several times during the first week and the patient gradually improved. In the thirty-two days of hospitalization the patient received three small blood transfusions (total of 300 cubic centimeters) and eight intravenous injections of lactate-Ringer's solution.

Case 3. D. V., a female two and one-half years of age, was admitted to the Iowa Lutheran Hospital on January 11, 1942. This child had been in good health until the first of January when she had had "influenza" lasting one week. Two days before admission she had complained of "stomach-ache" and had felt feverish. These symptoms were increased the next day. There was no vomiting until the day of admission to the hospital, at which time there was a board-like rigidity to the abdomen. At operation a perforated appendix and free purulent fluid were found. The appendix was removed; five grams of sulfanilamide powder were packed into the wound which was closed around a small Penrose drain. Beta-hemolytic streptococci were cultured from the peritoneal fluid. Immediately after the operation suction by means of the Wangensteen apparatus and intra-

venous fluids were started. For four days after the operation the patient was in a critical condition. Throughout this period the child was given intravenous glucose and sodium sulfadiazine twice daily. On the fourth postoperative day the patient was given a transfusion of 150 cubic centimeters of citrated blood. The following day the patient was barely recognizable due to the marked improvement: she sat up in bed, played with toys and talked. The Wangensteen suction tube was removed and a soft diet started. She was discharged from the hospital on the thirteenth hospital day.

Case 4. L. G., an eight-month old male infant was admitted to the Iowa Methodist Hospital on January 29, 1942. The birth weight was six pounds, one ounce, and growth and development were considered normal up to six months of age when the child weighed thirteen pounds. Since that time the child had not gained in weight and had become increasingly pale and weak. During the last week the child had felt feverish and the hands and eyelids became edematous. The dietary regime had been inadequate. The baby was breast fed for two weeks and then put on an evaporated milk formula. Cod liver oil and orange juice were started at one month of age but continued for only one month. Cereals, eggs, vegetables and fruits had not been given.

Physical examination showed an acutely ill infant of eight months. The skin and mucous membranes were pale but not jaundiced. Showers of petechiae were present all over the skin. The cry was feeble and the child could barely hold his head up unsupported. The eyelids and hands were edematous. Both ear drums were red and bulging. The heart was enlarged, the cardiac rate rapid and a systolic murmur was audible at the base and apex of the heart. The spleen and liver were palpable and extended two to three inches below the costal margins. The blood examination paralleled the anemic appearance. The hemoglobin was 35 per cent, the red blood cell count 650,000 and the white blood cells, 15,700. The blood smear showed normal lymphocytes, 40 per cent; early large lymphocytes, 24 per cent; neutrophiles, 12 per cent; basket or degenerative cells, 10 per cent; and normoblasts, 14 per cent. The blood smear was suggestive but not conclusive of a leukemia.

Following an initial small blood transfusion there was a very marked increase in hemoglobin and red blood cells. The blood smears continued to show many immature cells and normoblasts but no stem cells. The blood values after four small transfusions and an adequate dietary schedule plus additional iron and vitamins were within normal limits. Neither the peripheral blood smears nor

marrow smears were indicative of leukemia. As the blood volume was restored there was an improvement in the general appearance of the patient. The petechiae gradually faded. The child sat up without support and crawled all over the bed. The edema of the hands and eyelids disappeared. Both the liver and spleen receded in size and were barely palpable when the patient was discharged on March 1, 1942. The history, blood findings and subsequent course of this patient indicate a nutritional anemia complicated by infection rather than a leukemia.

SUMMARY

Changes in the water metabolism of the body are commonly associated with conditions which frequently occur in infants and children: namely, diarrhea, vomiting, fever and infectious diseases. These fluctuations in the body fluid may be easily corrected by the proper use of parenteral fluids. Blood transfusions are not indicated until the body has become rehydrated. Small repeated transfusions are apparently more effective than a single large transfusion. Case reports illustrating several types of disturbed water balance and the response to parenteral fluids are given.

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AN APPEAL FROM THE MEDICAL PREPAREDNESS COMMITTEE

Requests have come to the State Chairman on Procurement and Assignment for a list of available doctors who will be willing to dislocate themselves from their present locations to take over practices, for the duration, of those men who desire to serve their country in the armed forces. We appeal to the Iowa profession to consider such service seriously, and register with the central office of the Iowa State Medical Society in Des Moines, Iowa.

LOBECTOMY FOR BRONCHIECTASIS

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Bronchiectasis is a disabling and offensive disease. The extent to which it is also endangering to life is demonstrated by the studies of Bradshaw, Putney and Clerf¹ who reviewed 171 consecutive patients with untreated bronchiectasis admitted between 1925 and 1935 and found that 59 (or 34.5%) were dead from bronchiectasis or its complications. The need for a better form of treatment for bronchiectasis has long been recognized but not until recently has effective therapy been available.

As is so frequently the case, the first step in the effective treatment of the disease was an improvement in diagnosis, the precise localization of the lesion being made possible by the roentgenologic visualization of the bronchi with iodized oil. Controlled positive pressure anesthesia was the second step; and the improvement in the surgical technic of lobectomy was the final advance which has made the present day treatment of bronchiectasis successful.

The following case is presented because it demonstrates a severe degree of bronchiectasis which was localized to one lobe and was eradicated by lobectomy.

CASE REPORT

The patient was a white male, thirty-one years of age, who gave the history of a chronic productive cough which had persisted since an attack of pneumonia twenty years before. He raised about 150 cubic centimeters of foul sputum daily, was emaciated and had the clubbed fingers and large rounded fingernails which are characteristic of a long standing pulmonary disease. He was first seen in February, 1941, at which time he was suffering from an acute pneumonitis, with a fever up to 102.5 degrees, complicated by hemoptysis. He had had similar less severe attacks every few months in the previous year. Physical examination revealed the disease to be located in the lower right chest. Such attacks of pneumonitis adjacent to bronchiectatic cavities are usually diagnosed as pneumonia, which they closely resemble in their physical manifestations. The acute phase subsided after two weeks of medical treatment and, subsequently, roentgenologic studies were made which demonstrated the precise nature and exact location of the lesion. On the flat plate of the chest, cavitations were seen in the right base. Bronchograms with iodized oil revealed extensive bronchiectatic cavities in the right middle lobe. Equally important from a surgical standpoint is the fact that the bronchograms demonstrated the adjacent lobes on the right side, and all the lobes

on the left side, to be uninvolved. Because the patient was considerably disabled by his bronchiectasis, and since it was felt that he could not long survive the repeated attacks of associated pneumonitis, it was decided to remove the involved lobe.

On June 14, 1941, under ethylene anesthesia the major portion of the sixth rib on the right side was removed subperiosteally and the pleural cavity entered at this level. Positive pressure anesthesia was induced as the pleural cavity was opened and no cardiac or respiratory embarrassment was experienced. The findings on thoracotomy verified the roentgenologic diagnosis of bronchiectasis of the middle lobe. It is, however, difficult to determine the presence of bronchiectatic cavities by inspection or palpation, and it is important to determine preoperatively by x-ray whether both the middle and lower lobes, or only the one, are to be removed. The interlobar fissures were surgically extended and the middle lobe was isolated from the adjacent structures. Using Bethune snares the base of the lobe was constricted and the lobe removed. The bronchus, the pulmonary artery, the bronchial artery and the pulmonary veins were secured by mattress sutures. After the



Fig. 1.

Bethune snare was removed and the stump was seen to be free from bleeding, it was further secured by one non-absorbable ligature. Five grams of powdered sulfathiazole were placed on the stump. The removed lobe was opened by the pathologist and found to contain a series of huge

bronchiectatic cavities which had largely replaced the functional lung tissue (Figure 1). The positive pressure anesthesia was re-instituted and the remaining lobes were seen to expand normally. We then closed the chest wall, leaving a Pezzar catheter to the most dependent portion of the pleural cavity through a stab incision.

The convalescence was uneventful. The patient was placed in an oxygen tent continuously during the first twenty-four hours and intermittently during the subsequent twenty-four hours. The catheter was kept air-tight under water at a lower level until its removal on the third day. On the fifth day 70 cubic centimeters of sterile serosanguineous fluid were aspirated from the chest. On the seventh day the patient was permitted to be up out of bed. On the fourteenth day he returned home. He is free from symptoms except for an unproductive cough once or twice a day. He described an immeasurable relief at the absence of the foul sputum which he had raised at frequent intervals before the diseased lobe was removed. He gained in weight and returned to work five weeks after his operation. At the present time, six months later, the patient weighs 150 pounds and has no recurrence of his respiratory symptoms. He says he feels entirely well.

This case is reported because of the rarity of involvement of this particular lobe (the middle), because of the advanced stage of the disease and because of the completeness of the recovery following lobectomy. A photograph clearly demonstrates the nature and extent of the bronchiectatic cavitation.

In conclusion I should like to stress the importance of the three scientific advances which have made the surgical cure of bronchiectasis possible: first, the precise roentgenologic diagnosis by means of iodized oil; second, the importance of positive pressure anesthesia when the pleural cavity is to be opened; and third, the surgical technic by which the bronchus is occluded and the bronchial artery and pulmonary vessels secured.

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COMING MEETINGS

American Urological Association, Western Branch, will hold its annual convention at Hotel Del Monte, California, from June 22 to June 24.

American Congress of Physical Therapy will hold its Twenty-first Annual Session, September 9 to September 12, at the Hotel William Penn in Pittsburgh.

VAGINAL TAMPONS FOR MENSTRUAL HYGIENE*

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The use of commercial vaginal tampons for menstrual protection has been popularized during the past few years, but there are few or no data available concerning their acceptability, efficiency and safety. Various requests for information concerning these factors stimulated a questionnaire study, which elicited replies from 569 college students and nurses. The large majority of these women were single; all were white; and their ages ranged from eighteen to thirty-six years, with the greater number under twenty-three years.

Among the entire group, 412 individuals had had no experience with such tampons, while 157, or 27.6 per cent, had used them from one month to seven years. In 73 instances they had been employed for more than one year and in 67 for less than 12 months, while 17 failed to designate the length of their experience.

Acceptability: One hundred and twenty-five, or 79.6 per cent, of those who had used tampons, found them comfortable and usually were not conscious of their presence, while 23, or 14.7 per cent, noted some subjective discomfort, such as vaginal pressure, urinary urgency or difficulty with defecation, and nine offered no comment. Those who were enthusiastic cited absence of chafing and decrease of odor as the most distinct advantages of this method over the more commonly employed vulval pad. Fifty-four women, or 34.4 per cent, had discontinued the use of tampons for the following reasons:

Discomfort	19
Not adequate to control flow.....	12
Difficulty with insertion.....	3
Physician advised against use.....	7
Too much trouble.....	3
Irritation	3
Expense	2
Total	54

Thirty-two individuals (20.4 per cent) noted some difficulty in inserting or removing the tampons, but in only a few instances was this factor responsible for discontinuing their use. Some of the married women made the observation that this difficulty had disappeared after marriage. In addition to the two women who stopped using tampons solely because of their cost there were 17 others who gave this as a secondary reason. Generally it was stated that there was no significant difference in the cost of tampons and vulval pads.

Efficiency: Twelve women stopped the use of tampons because they were not adequate to absorb

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the flow, and 35 others continued their use even though it was necessary to supplement them with vulval pads during the heaviest part of the flow. Most of those who noted their inadequacy stated that they would probably have been satisfactory if more frequent changes had been possible. A few individuals introduced two tampons at the same time for greater safety.

Safety: Twenty-five individuals, 15.9 per cent, noted irritation of the vaginal mucosa, and many of them stopped using tampons for this reason. Others found that changing the type or size of the tampon eliminated all irritation. It was generally agreed that improper introduction could lead to discomfort.

Menstruation was claimed to have been shortened in eighteen instances and lengthened in five. Menstrual cramps were diminished in four and increased in fifteen. Leukorrhea was believed by seven women to result from the irritation of the tampons, and in two instances, their use always led to an abnormal discharge which was not present when vulval pads were employed. Two patients have come to our attention who developed profuse, foul leukorrhea through failure to remove a tampon by reason of the breaking of the attached cord.

Comment and Conclusions: In going through the Index Medicus from 1928 to 1942, only two references,^{1 and 2} one of which was not available,² were found on the subject of internal sanitary vaginal napkins. In Arnold's and Hagele's study 95 patients between the ages of sixteen and thirty-eight years returned reports on 240 menstrual periods. Eighty-seven found the tampon inadequate. In eighteen instances the tampon merely acted as a plug and prevented absorption of the menstrual discharge. Several of the sponges became soaked with urine.

Curtis, in his recent Textbook of Gynecology,³ makes the statement, "A menace has developed through the manufacture of cotton and vegetable fiber conical plugs for insertion into the vagina in order to alleviate the annoyance of an external pad. Intravaginal sanitary pads may be very useful and at the same time essentially harmless if worn for a few hours on special occasions, but routine use as a substitute for external pads is inadvisable, for there is too great risk of infection."

In the authors' experience there were no serious sequelae; the minor symptoms which did develop were invariably attributed to the tampons and were easily relieved by discontinuing their use or by employing a different type or size. From the evidence obtained there is no reason for believing that vaginal tampons of proper size and properly

inserted produce other than mild discomfort or slight irritation and discharge.

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THE POTENTIAL TOXICITY OF IMPLANTED SULFANILAMIDE

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Since the discovery of sulfanilamide there has been a grand rush to exploit this marvelous drug. It has been tried in practically every disease and in every conceivable pharmaceutic form. Its preparations have been given orally, rectally, subcutaneously, intramuscularly and intravenously; it has been rubbed, sprayed, injected or poured into every natural orifice of the human body. Wherever the noxious streptococcus and his fellows lurked, there have we attempted to lodge this life-sparing medicine and often with little regard for its effects upon the vital recipient tissues.

Now the dread traumatism of war is opening a thousand new avenues of invasion for our bacterial enemies. With almost reflex celerity, we are speeding to halt these inroads with a barrage of sulfanilamide. Indeed, this compound and its relatives seem destined to challenge the military importance achieved by Carrel-Dakin's solution in World War I. If this is to become possible, however, we must be aware of the kaleidoscopic aspects of its power. If this drug is to be dashed into every wound, into the pleural, pericardial, peritoneal and joint cavities, into the meninges and subarachnoid spaces, we must be on the alert for its toxic potentialities. With this in mind we are presenting two provocative cases from our own observation and a summary of some of the recent literature on this subject.

CASE REPORTS

Case 1. Mrs. S. G., a white female, sixty-nine years of age, having been in usual good health, presented herself, complaining of a small, hard painless lump in the right breast. There was no bleeding or discharge from the nipple. Five days later, under competent surgical care, a radical mastectomy and extirpation of axillary glands were performed. Microscopic tissue study revealed an adenocarcinoma, of Grade III malignancy with axillary metastases. Her recovery was uneventful and she was dismissed on the tenth post-operative day with the wound healing satisfactorily.

Nine days later, she returned to the hospital

with the wound partially disrupted and considerable purulent discharge exuding. Her clinical and laboratory studies showed: pulse, 94; respirations, 22; temperature, 100 degrees; hemoglobin, 12.8 grams; erythrocytes, 4,310,000; and leukocytes, 11,400. The differential count showed polymorphonuclears, 62 per cent; lymphocytes, 28 per cent; and monocytes, 10 per cent. Hot compresses and hydrogen peroxide irrigations were applied to the wound with some reduction in discharge. On the fifth hospital day, a generous amount (several grams) of sulfanilamide powder was sprinkled into the wound, deep into the axillary recesses and under medial and lateral skin flaps. The edges were approximated by adhesive bands.

About sixteen hours later, the patient got out of bed, seemed very confused, wandered about aimlessly and was obviously disoriented. She was irrational, became involuntary and considerably exhausted. Twenty-four hours after implantation, she was still confused but fairly rational, had a staring expression and was moderately dehydrated. Her temperature, pulse and respirations were normal: leukocytes, 12,600; and blood sulfanilamide, 10.9 milligrams per cent. The following day, except for slight nausea, she was entirely rational and comfortable and the wound was somewhat improved. No more sulfanilamide was used and seven days later she was released, the wound open but clean and her mental condition normal.

Case 2. Mr. H. S., a white male, about thirty-four years of age, developed a generalized peritonitis following a ruptured appendix. At operation, considerable seropurulent material was free in the peritoneal cavity and the peritoneum had a boggy red granular appearance. A large abscess in the lower right quadrant was opened and several ounces of fecal smelling pus aspirated. Five grams of sulfanilamide powder were sprinkled over the coils of gut and the wound was closed around a rubber drain in the abscess cavity. Twenty-four hours later the blood sulfanilamide was 7.1 milligrams per cent. His subsequent course was checkered by nausea, vomiting, distention and abdominal colic. These symptoms subsided under conservative management and he made a satisfactory recovery.

If we recall that orally, ten to twenty grams or more are frequently needed to raise the blood concentration to satisfactory levels of five to fifteen milligrams per cent, then these cases are of unusual interest. We consider them typical examples of the remarkable absorbability of sulfanilamide from infected wounds and of its rapid concentration in the blood stream. Case 1 also demonstrates a form of psychosis sometimes seen following the use of sulfanilamide.

DISCUSSION

In reviewing the literature on this subject, we encountered a number of interesting observations. Reference to the bibliography will amply reward those more deeply intrigued by this material.

The implantation dosage varied from five to thirty grams in all types of operative and traumatic wounds. The most common intraperitoneal dosage was eight grams, with one advocate using twenty grams. The dose used most frequently in compound fractures and similar extraserosal wounds was five to fifteen grams.

The rapidity of concentration in the blood stream from implantation varied directly with the size of the initial dose. Where five to fifteen grams were used, a maximum blood concentration of one to fourteen milligrams per cent was reached in eighteen to forty-eight hours with a gradual reduction to minimal or zero quantities in seventy-two hours. When twenty to thirty grams were the initial dose, the maximum blood concentration of 9.7 to 19.5 milligrams per cent was reached in forty-eight to one hundred twenty hours with reduction to minimal amounts after 168 hours. One writer² states the rate of absorption is proportional to the degree of peritonitis (in intra-abdominal implants) present, but this was not noted by other observers. A very interesting experiment on comparative absorptivity was conducted by Haag and Speelman. They found that in normal dogs, the rates of absorption from the pleural and peritoneal cavities and from the gastro-intestinal tract were practically identical. However, it is not known whether this is true of diseased tissue or whether it would be true in human subjects.

There was remarkable unanimity of opinion concerning the value of parenteral sulfanilamide in preventing or inhibiting infection in both operative and traumatic wounds. The reports on compound fractures and ruptured appendices were particularly glowing. It was observed that direct application resulted in an infinitely greater concentration of drug at the site of implantation than could be obtained otherwise. It was further noted that necrotic tissue or its digestion products seriously impaired the effectiveness of the drug and parenthetically that debridement and good drainage are still the *sine qua non* in the care of infected tissue whether sulfanilamide is used or not. Mayo and Miller report that irrigation of infected wounds with hydrogen peroxide in addition to the use of sulfanilamide powder further increases the effectiveness of the treatment.

Most authors favored the powdered or crystalline form of sulfanilamide and did not consider sterilization necessary; one stated that autoclaving impaired the absorptivity of the drug. For irriga-

tion or direct application to open wounds, a suspension of two grams of the powder added to 100 cubic centimeters of a saturated solution of sulfanilamide in normal saline is suggested by Herrell and Brown of the Mayo Clinic.

There was some divergence of opinion on the effects of the drug on healing, but the consensus was that healing processes were little impaired.

There was little mention in the literature of reactions following implanted sulfanilamide. Several authors suggested this possibility, however, in view of the high absorptive rates disclosed. A number of cases of toxic psychosis apparently precipitated by the oral administration of sulfonamides were reviewed with the idea of explaining the case presented. It was found that definite psychotic manifestations have followed as little as eighty grains of neoprontosil. Usually the precipitating dose was much greater—500 to 3,000 grains taken over several weeks. The main features of these reactions were confusion, disorientation, retardation, bizarre behavior, paranoic trends, hallucinations, negativism and delirium. All of these disappeared within a few hours or days after cessation of the drug. These observations compare favorably with those made by us in Case 1.

In the light of the facts demonstrated by these two cases and by the literature, the writer wishes to call attention to the dangers as well as the advantages of this route of administration. Recognition of the very rapid absorption from all types of wounds must engender caution. The writer strongly advocates a preoperative blood count before implanting sulfanilamide and daily leukocyte and differential counts for four or five days thereafter. Blood sulfanilamide determinations at twenty-four, forty-eight and seventy-two hours after implantation are indicated. If toxic manifestations such as leukopenia, cyanosis, skin rash or psychic changes occur, one should immediately attempt removal of the residue of the drug. Where possible the wound should be reopened and irrigated with normal saline. Intravenous fluids or plasma will help dilute the drug and reduce its toxicity. Any supplementary sulfonamide treatment must be stopped at once.

CONCLUSIONS

1. Sulfanilamide powder used in wounds is apparently very effective in preventing or inhibiting infection.

2. Sulfanilamide is absorbed very rapidly from both normal and diseased tissue. Toxic manifestations of a generalized nature are not unknown when the drug is used in wounds.

3. The same precautions observed when sulfanilamide is used orally are urged upon those who use it by implantation.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

POLIOMYELITIS FOLLOWING TONSILLECTOMY

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Evidence of a causal relationship between recent tonsillectomy* and the bulbar form of poliomyelitis in young children has gradually been accumulated. The following case in which the bulbo-spinal type of the disease occurred fifteen days after tonsillectomy is further evidence that such is the fact. The case is reported to emphasize the need to consider the relationship between the operation and poliomyelitis and to suggest that whenever possible the time selected for tonsillectomy be before or after what may be termed the poliomyelitis season.

CASE REPORT

The patient, a white girl four years of age, was admitted to The Finley Hospital August 22, 1941,

*In this article, tonsillectomy refers to removal of either tonsils or adenoids or both.

because of "weakness of the arms and inability to move both legs."

Family History: The father, mother and one brother were alive and well.

Past History: The patient developed normally and was well until about four months before admission when she developed a right peritonsillar abscess. Twenty days before admission, her tonsils were removed in this hospital as a prophylactic against further attacks of the peritonsillar infection.

Present Illness: On August 17, after playing out in her yard, the patient complained that she was tired. The next day she was feverish and it was thought that she had a cold. On the following day she was more feverish and was taken to a doctor in the evening when she complained that her neck hurt. She vomited just after the throat was examined but it was thought this was due to gagging. The following morning she was first seen, and since she was unable to move either leg and her arms were very weak, the parents were advised to send her to the hospital.

Physical Examination: The patient was a well developed and nourished white girl who appeared very ill. The temperature was 99.2 degrees, the pulse was 120 and the respirations were 22 per minute. She had difficulty in talking and swallowing. The neck was stiff and on motion the patient complained of pain. The head was not thrown backward. The pupils reacted normally to light and accommodation. The nose and ears were negative. The right tonsillar fossa showed some fibrinous exudate; the left fossa was clean. The thyroid and cervical lymph nodes were not remarkable. The lungs and heart were normal to palpation and auscultation. The heart rate was rapid. The abdominal muscles were flaccid. On inspiration, the costal angle was widened and the abdominal wall was pushed forward. There was no abdominal tenderness. The genitals were negative. There was almost complete loss of motion in the lower extremities. The knee jerks were absent. The arm movements were very weak and the biceps reflexes were exaggerated. There was tenderness of the arm muscles even with slight pressure.

Provisional Clinical Diagnosis: Poliomyelitis.

Course in the Hospital: The temperature fluctuated between 99 and 100.6 degrees; the pulse between 120 and 140 per minute; the respirations between 20 and 30 per minute. The latter became irregular, short and jerky and at times the abdominal breathing became pronounced. The reflexes of the lower extremities and abdomen disappeared.

Examination of the spinal fluid showed 110 lymphocytes per cubic millimeter; faint globulin test with no organisms in smears or cultures. She was given Rosenow's serum twice daily but without benefit. Gradually the breathing became more difficult; she had attacks of cyanosis and mucus tended to gather in the throat. Later she was unable to swallow and failed rapidly, dying on the fifth day in the hospital of respiratory failure.

Final Clinical Diagnosis: Poliomyelitis; bulbo-spinal type.

Comment: This patient had tonsillectomy and adenoidectomy performed fifteen days before the onset of the symptoms of the poliomyelitis. Since the incubation period of poliomyelitis is thought to be between seven and seventeen days, it is probable that the virus was present in the patient's throat when the tonsils were removed. The operative trauma was the factor which determined not that the infection would occur but that this type of poliomyelitis would result—that is, the bulbo-spinal form of the disease.

DISCUSSION

In 1910, Sheppard,¹ during an investigation of an epidemic of 200 cases of anterior poliomyelitis in Springfield, Massachusetts, described one case in which the bulbar form of the disease occurred seventeen days after tonsillectomy. He also mentioned another case of the spinal type of the disease which he associated with the tonsillectomy although his report indicates that the child was already infected when the tonsils were removed. He stated: "It might be that the tonsil and adenoid tissue (tonsillar ring of Waldeyer) may offer a resistance to microbic invasion. If this is the case, it might seem on a priori grounds injudicious to remove an inflamed tonsil; especially in the presence of an acute epidemic infection characterized in many instances by involvement of the upper respiratory passage." As so often is the case, Sheppard's observations were neglected until more recent studies renewed interest in the subject.

In 1928, Ayer² was also impressed with the possible relationship between tonsillectomy and the bulbar type of poliomyelitis because of the occurrence of nine cases, five to ten days after the operation. Aycock and Luther³ in their study of 714 cases of poliomyelitis in Massachusetts and Vermont in 1927 and 1928 found 36 patients who had had tonsils removed within one year of the onset of the disease. Sixteen of the 36 cases occurred within seven to eighteen days after the operation. Nine of the sixteen were of the bulbar type.

Somewhat similar statistics have been reported by various workers in different parts of this country and Canada, notably Silverman,⁴ Eley and Flake,⁵ Fischer, Stillerman and Marks⁶ and Top and Vaughan⁷ who investigated epidemics in Syracuse, Boston, Toronto and Detroit respectively. In 1942, Aycock⁸ analyzed all the available statistics and found reports of 215 cases of poliomyelitis following recent tonsillectomy. Of these, 170 occurred within thirty days after tonsillectomy: 99 were of the bulbar type and 22 of the bulbo-spinal type. Aycock points out that the less common bulbar poliomyelitis predominates over the spinal form five to one in the cases occurring within thirty days following tonsillectomy, but after that time the proportions of bulbar, spinal and non-paralytic cases gradually return to those encountered in non-tonsillectomized individuals. Aycock believes this indicates that the operation is not a determinant between paralytic and non-paralytic poliomyelitis but between the bulbar and spinal forms of the paralytic diseases.

In seeking an explanation for this fact, Aycock refers to the work of Sabin who observed that transitory contact between the normal or injured tonsils of monkeys and the virus of poliomyelitis was not enough to produce the disease, but these animals were infected when the virus was injected into the tonsillopharyngeal region. Animals inoculated in this manner developed bulbar or bulbo-spinal manifestations with great frequency as compared with animals in whom the virus was instilled intranasally. The application of the virus to the tonsillectomy wound failed to produce the disease in monkeys while the disease did develop following injection into the tonsillar region. From these findings, Sabin reasoned that in humans it would be expected that bulbar poliomyelitis following tonsillectomy would occur where the virus was already present at the time of operation rather than from contamination of the wound afterward. Aycock states that this is in accord with the occurrence of the bulbar poliomyelitis following tonsillectomy at specific intervals corresponding to the incubation period of the disease.

As pointed out in a recent editorial in the *Journal of the American Medical Association*⁹: "The limited occurrence of the paralytic form of poliomyelitis, when contrasted with the widespread dissemination of the virus, suggests that certain factors may exist which determine whether clinical or subclinical disease will result following infection." The occurrence of the bulbar type of the disease after tonsillectomy is an instance of such a factor which according to Aycock involves autarcesis of the host rather than immunity to the virus.

From a practical point of view, this vulnerability of the nasopharyngeal mucosa should be given due consideration where tonsillectomy is considered in younger children. Since the operation is practically never an emergency, a time should be selected when poliomyelitis is least prevalent. In this area, most of the cases of the disease occur in August and September. Therefore, in order to prevent a certain number of cases of the highly fatal bulbar poliomyelitis, some other season in the year should be chosen for tonsillectomy.

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SIXTEENTH IOWA CONFERENCE ON CHILD DEVELOPMENT AND PARENT EDUCATION

With the central theme, "Children in Wartime," the Sixteenth Iowa Conference on Child Development and Parent Education will be held in Iowa City on June 16 and 17.

Mrs. Evelyn Millis Duvall, Executive Director of the Association for Family Living, Chicago, Illinois, will speak and conduct a round table on Marriage and a Happy Life; Dr. Louis V. Newkirk, Director of Industrial Arts in the Chicago Public Schools, will present the topic Work for Willing Hands; Dr. Fritz Redl, Professor of Education at Wayne University, will speak and conduct a round table on Education Keeps Step; Dr. Ruth Benedict, Department of Anthropology at Columbia University, will discuss Surviving Racial Myths and The Personal Problems of Young People Everywhere. In recognition of the twenty-fifth anniversary of the founding of the Iowa Child Welfare Research Station, Dr. George D. Stoddard, director of the Station, will deliver an address entitled The First Quarter Century.

Round table discussions, motion pictures, panel discussions and forums will supplement the individual talks. The conference, which is held annually, is sponsored by the Iowa State Council for Child Study and Parent Education with the cooperation of the Iowa Child Welfare Research Station and the extension divisions of the University of Iowa, Iowa State College and Iowa State Teachers College.

STATE DEPARTMENT OF HEALTH



EPIDEMIC DIARRHEA OF THE NEWBORN INFANT

Outbreaks of epidemic diarrhea among newborn babies have been reported during recent years from hospitals in various sections of the country. Frant and Abramson made investigation of 23 such epidemics that occurred in nurseries of fifteen hospitals covering a period of three years from July, 1934, to July, 1937. Studying the post-natal course of 4,594 babies, these workers reported that 711 or 15.5 per cent developed epidemic diarrhea and 335 or 7.3 per cent died from this cause.

Nature of Illness

In an outbreak of diarrhea among newborn babies investigated in an Iowa hospital during May, 1942, symptoms and findings were characterized by greenish, watery stools, marked dehydration with consequent weight loss, rapid respirations, acidosis, signs of cerebral irritation, stools were free from blood or mucus and the condition was, for the most part, afebrile. With one exception, those with diarrhea were bottle fed babies.

Etiology

Careful study of stool specimens in the investigation of certain outbreaks of diarrhea among newborn babies, has failed to reveal pathogenic bacteria. Organisms reported as having been isolated in other epidemics include the following: Streptococcus hemolyticus, *B. coli*, *B. dysenteriae* (Flexner), *B. mucosus capsulatus*, non-hemolytic streptococcus, staphylococcus.

Manner of Spread of Infection

Investigation of epidemic diarrhea in the newborn infant requires special attention to bottle nipples and caps, to personnel, equipment and procedures in nursery and formula rooms. In an outbreak in New York, reported by Lembcke in 1941, factors such as the water supply, nursery air-conditioning unit and nursing personnel, were ruled out as having played a probable part in the transmission of infection. It was found, however, that the method of sterilizing bottle nipples and formula was inadequate. The procedure followed rou-

tinely in the hospital concerned had been to rinse the used nipples thoroughly, attach them to the bottles containing formula and to keep the bottles in an upright position for twenty minutes in a sterilizer containing three inches of boiling water. Bacteriologic examination showed staphylococci and *B. subtilis* in nipple washings, and from 7,000 to 97,000 bacteria per cubic centimeter in the formula when "sterilized" by the above mentioned method. The epidemic was controlled by isolating the sick babies "in a separately staffed and equipped nursery" and by properly sterilizing the formula and nipples.

Prevention

Prevention of epidemic diarrhea in the newborn infant is dependent upon equipment and methods in nursery and formula rooms, simulating as nearly as possible the aseptic technic of the operating room.

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RELATIVE OCCURRENCE OF PNEUMOCOCCUS TYPES IN IOWA 1941-1942

During the months of the past pneumonia season, in continuance of a plan begun four years ago, the Department supplied diagnostic anti-pneumococcal serum without cost to hospital and private laboratories which serve as typing stations. The marked improvement in recent years, in reporting of pneumococcus and other forms of pneumonia is due in large part to the cooperation of laboratory technologists who keep the Department informed of positive laboratory findings through the use of special pneumonia report cards.

In addition to mailing individual report cards, laboratory workers forward each month a report of positive findings in sputum specimens. The

following table contains figures showing the relative frequency of occurrence of the different types of pneumococcus for the ten-month period beginning July, 1941, and extending through April, 1942:

TYPE INCIDENCE OF PNEUMOCOCCUS IN IOWA
Based on Reports to the Iowa State Department of Health from
Typing Stations, From July 1941, through April 1942

TYPE	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	10 mo.	Per
	1941	1941	1941	1941	1941	1941	1942	1942	1942	1942	TOTAL	cent
I	4	0	0	5	9	24	31	25	25	15	138	16.61
II	0	0	1	2	6	10	12	8	18	8	65	7.82
III	2	2	2	6	8	11	13	11	16	7	78	9.39
IV	0	0	2	2	6	7	4	4	8	4	37	4.45
V	0	1	0	2	1	6	5	6	17	4	42	5.06
VI	2	5	4	2	7	5	8	9	3	2	47	5.66
VII	2	3	3	5	10	12	1	10	6	7	59	7.10
VIII	1	2	4	4	6	5	6	4	5	1	38	4.57
IX	0	0	3	1	2	2	1	1	1	1	11	1.32
X	2	2	3	1	1	0	1	2	1	2	15	1.81
XI	0	0	1	1	0	2	2	4	3	1	14	1.68
XII	0	0	0	1	1	1	1	0	0	0	4	.48
XIII	0	1	0	1	1	2	2	0	2	3	12	1.44
XIV	1	0	2	1	1	1	4	6	7	2	25	3.01
XV	0	0	0	1	1	3	3	4	2	17	2.05	
XVI	0	0	0	1	2	0	2	2	4	0	11	1.32
XVII	1	0	0	0	0	1	7	3	3	2	17	2.05
XVIII	0	2	3	3	1	2	1	2	2	2	18	2.17
XIX	3	0	1	1	4	8	8	5	17	4	51	6.14
XX	2	0	0	5	4	3	2	1	3	5	25	3.01
XXI	1	0	0	0	0	0	1	0	1	1	4	.48
XXII	1	1	0	0	1	3	2	0	0	10	1.20	
XXIII	1	2	0	0	2	1	4	2	7	2	21	2.53
XXIV	0	1	0	1	1	2	1	0	1	0	7	.84
XXV	0	0	0	0	0	1	0	0	0	0	1	.12
XXVI	0	0	0	0	0	1	0	0	1	0	2	.24
XXVII	0	1	1	3	0	2	0	1	2	0	10	1.20
XXVIII	1	0	1	1	3	2	3	1	2	0	14	1.68
XXIX	0	0	0	1	0	0	0	1	1	1	4	.48
XXXI	0	0	0	1	0	0	1	1	1	1	4	.48
XXXII	0	0	1	0	2	0	1	1	2	2	9	1.08
XXXIII	0	0	2	3	1	1	2	10	4	0	23	2.77
XXXIV	0	0	0	1	0	1	0	0	0	0	2	.24
TOTAL	24	23	31	56	81	119	129	124	166	78	831	100.00
Multiple Types	1	1	6	3	7	4	2	3	10	6	43	

Of special interest in the accompanying table is the fact that the combined percentage distribution of Types I, II and III (33.82 per cent) is considerably less than expected, due to a corresponding increase in prevalence during the past season, of some of the higher types, notably IV, V, VI, VII, VIII, XIV, XIX, XX, XXIII and XXXIII.

SPOTTED FEVER VACCINE

Through the courtesy of R. R. Parker, Ph.D., Director of the Rocky Mountain Laboratory of the United States Public Health Service, Hamilton, Montana, the Department has received without cost, a supply of spotted fever vaccine, prepared from the chick embryo by the method of Dr. Herald R. Cox. Vaccine for active immunization of children and adults at the Tama Indian Reservation was forwarded by the State Department of Health and administered by Drs. Ira D. Nelson and A. A. Pace of the Indian Service at Toledo. The Department is prepared to furnish vaccine free of charge in response to requests from physicians, for immunization of persons subject to frequent exposure to the common dog tick.

PREVALENCE OF DISEASE

Disease	April '42	March '42	April '41	Most Cases Reported From
Diphtheria	30	10	17	Delaware, Cerro Gordo
Scarlet Fever	240	232	226	For the State
Typhoid Fever	3	2	6	Polk, Page
Smallpox	4	0	12	Pottawattamie, Taylor Winneshiek
Measles	1356	1445	1171	Black Hawk, Humboldt Mahaska, Webster, Bremer Sac
Whooping Cough	104	107	197	Des Moines, Polk, Wayne Scott
Brucellosis	16	14	24	For the State
Chickenpox	464	496	507	Boone, Woodbury, Dubuque
German Measles	18	8	34	For the State
Influenza	12	14	165	Mitchell, Wayne
Mumps	750	764	1300	Des Moines, Dubuque, Linn
Pneumonia	227	238	152	For the State
Poliomyelitis	0	0	1	For the State
Tuberculosis	19	54	12	For the State
Gonorrhea	138	173	114	For the State
Syphilis	253	221	256	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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DENNIS H. KELLY, Associate Editor..... Des Moines

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Vol. XXXII JUNE, 1942 No. 6

A. M. A. MEETS IN ATLANTIC CITY JUNE 8 to 12, 1942

A short time ago we received from Dr. John H. Peck of Oakdale the following editorial written by Dr. Henry A. Christian and published in the Annals of Internal Medicine anent attendance at medical meetings. Dr. Peck suggested that we might want to use it in the JOURNAL, and we could think of no more appropriate place than in connection with the forthcoming annual session of the American Medical Association at Atlantic City on June 8. The editorial is entitled "Progress or Retrogress?"

"Physicians can be divided into two great groups, those that are learning and those that are forgetting, those that each year know more, and those that each year know less. There seems no third group, those that are stationary.

"A few physicians increase in knowledge from within and grow from their own doing. These are the innate investigators. The rank and file require outside help to grow and to progress. Books, meetings, contacts, discussions, teachers, are our armamentarium for progress. Like the 'spring tonic' of past days, all of us need some of this medicine, at least annually, better if it comes more frequently. A large majority of physicians know their need and seek treatment.

"Things in nature rarely are static; they increase or they decrease; they grow or they decay; they progress or they retrogress. Man's education in many respects resembles things of nature; rarely is it static; when knowledge does not increase, almost always it decreases. Physicians should remember this and make every effort to keep out of the static state and on the side of increase, of growth, of progress.

"Contact with colleagues eager to learn, listen-

ing to discussions by those capable of teaching, witnessing demonstrations and clinics, seeing scientific exhibits lead to more reading and better observation of patients. Herein lies medical progress. The meeting of the American College of Physicians [Editor's Note—*Here we would substitute the meeting of the American Medical Association*] provides just these opportunities. Attendance at this meeting is a potent way for a physician to get himself out of the group of those who each year know less. The stimulus received from attendance at a medical meeting where men eminent in the profession speak lasts long after the meeting is over."

We hope the truth of Dr. Christian's remarks impresses our readers as forcibly as it did us. Unquestionably the war situation will deter many from traveling to Atlantic City who otherwise would go; but medical progress must continue in times of war as well as in times of peace. Perhaps it is more imperative now than ever before that physicians inform themselves of the latest advances in medical science and knowledge. The medical profession will have need of all its skill and all its stamina to meet successfully the challenge of the next few years.

HEREDITY IN TUBERCULOSIS

An experimental study by Max B. Lurie on the influence of heredity in resistance to tuberculosis is of profound significance. It offers a scientific explanation for many unanswered problems in immunity in tuberculosis.

In a seven-year study at the Phipps Institute the author has observed the behavior of several families of rabbits through five and six generations under conditions of natural respiratory contagion. Similar studies were carried out in artificially acquired tuberculosis in the same families.

From this meticulously conducted experiment Lurie concludes that the resistance of rabbits to naturally or artificially acquired tuberculosis is a function of their genetic constitution; it is the genetic constitution *per se* which determines whether, under given conditions of natural respiratory infection, rabbits will acquire first, a rapidly progressive primary tuberculosis; second, a localized chronic ulcerative phthisis analogous to reinfection tuberculosis; or third, a disease of intermediate character between these extremes.

It was also determined that when the animals were treated with heat-killed tubercle bacilli, the resistant family developed a high degree of allergic sensitivity rapidly, whereas the family of greatest susceptibility developed sensitivity slowly and to a lower degree. The resistant family developed agglutinins of high titer rapidly in contrast to the

susceptible family which developed antibodies much more slowly and in lower titer.

The rate and intensity of development of local immunity was intimately and constantly correlated with resistance to the disease. The different families were subjected to preliminary treatment with heat-killed tubercle bacilli and later inoculated cutaneously. The resistant animals developed lesions which reached their peak rapidly and healed rapidly and completely in most instances; the rabbits survived for some time and finally died from chronic ulcerative pulmonary phthisis. In the susceptible families the lesions progressed for a long time and healing was slow and incomplete; the animals died shortly of generalized, rapidly progressive tuberculosis. Microscopic studies revealed that at the portal of entry the epitheloid cells in the resistant animals destroyed the tubercle bacilli effectively. In the susceptible animals the mononuclear leukocytes were swarming with tubercle bacilli, there was massive caseation, and dissemination of organisms by the lymphocytes was phenomenal.

When the results of this study on rabbits are applied to the pathogenesis of tuberculosis in man, if in man resistance is controlled by determinants similar to those found in the experimental animal, we reach the conclusion that the genetic constitution determines whether an adult will acquire a progressive primary tuberculosis or a chronic phthisis. This study explains the great difference in the response of adults to primary infection with tubercle bacilli; one author contends it is a benign infection comparable to the primary infection of childhood; the next writer insists it manifests itself as a rapidly progressive primary infection with hematogenous spread; and still another worker cites cases to demonstrate that it is clinically indistinguishable from reinfection tuberculosis.

It may be concluded that resistance to tuberculosis is a function of the genetic constitution, and the character of the infection in the adult is determined by the natural resistance of the individual.

UNIFORM PLAN OF THERAPY IN CIVILIAN DEFENSE

The organization for medical defense is a complex problem. However, in the preparation for the care of civilian casualties in the event of local military action or for the care of casualties occurring in defense industries it is paramount that each hospital organization set up some standardization of technic.

Recently two diverse reports on the treatment of burns are recorded. The National Research Council recommends the tannic acid treatment of burns. An article in *Surgery, Gynecology and*

Obstetrics, condemns the tannic acid treatment and demonstrates the advantages of pressure dressings and strict aseptic technic.

It is obvious that each hospital unit must decide the merits of the various methods of treatment and arrive at an acceptable therapy of burns. Likewise the management of lacerations, compound fractures, etc., should be outlined and a uniform method of therapy be employed. The treatment of shock and hemorrhage should be anticipated and personnel should be trained in this particular field of therapy. Before some serious accident occurs all plans should be made, equipment should be in readiness, and a uniform plan of therapy be set up. Unless this is done medicine in general and the physician in particular will be obviously negligent and certainly culpable.

In Iowa the framework for civilian medical defense has been set up in every county and a chief of emergency medical service has been appointed. The JOURNAL would suggest that this chief might well consult the other physicians who are serving for the emergency, and determine which method of treatment they wish to follow in each county, and instruct the first aid post workers accordingly.

WAR SAVINGS BONDS PROGRAM

The JOURNAL is happy to be able to take part in the "buy bonds" campaign now in progress throughout the land. Probably no group in America understands more clearly the necessity for the purchase of government bonds by the general public than does the medical profession, and we would hazard the opinion that the physicians stand close to the top in the list of bond purchases. Nevertheless it is a subject so vital to our war effort and to our economic security that every means available must be utilized for constant reiteration of this patriotic responsibility of those on the home front. The following communication for publication in the JOURNAL was secured from the Treasury Department in Washington:

We have faith in America. We look toward ultimate success in this war that encircles the globe. Victory is the goal—no matter how great the cost, and we as individuals will share the obligations of war—in service, sacrifices and paying the costs of war.

The national fiscal policy during the period of World War II determines much of importance for Americans today and in the future. It is true that dollars cannot buy success in this worldwide conflict. However, money power determines in part the organization of the nation's machine power, material power and man power. Our fiscal program must cover the needs of war and must forestall, as far as possible, disorganization from infla-

tion now and financial upheaval from postwar deflation.

We shall pay as much as possible of the cost of war out of tax revenues, but it is impossible to pay the total bill through taxation. The government must borrow to meet the deficit. We learned from our experience in World War I that borrowing which contributed to inflation not only skyrocketed prices, but led to postwar financial maladjustment. To borrow large sums of money from banks and lending agencies now means that we might follow a similar route to inflation.

Today the government seeks to borrow the necessary money directly from the people from their current earnings. This in itself is a three-fold objective. In the first place, the dollars loaned to the government through the purchase of United States War Savings Bonds help to meet the annual costs of the war effort. Then, too, the money so borrowed from individuals is withdrawn from consumers' purchasing power and tends to curb inflation, thereby restricting the uptrend in prices. Finally, this program gives an opportunity to all Americans to invest their money in registered, interest-bearing securities which will help us provide for our own future security.

We, as a united nation, face the future with grim determination. This is total war, and each of us must accept his responsibility for the job to be done. A part of this job is the budgeting of dollars. We must buy and continue to buy the nation's "freedom" bonds.

REHABILITATION OF REGISTRANTS*

The rehabilitation of registrants has been in process in the states of Maryland and Virginia for some time. This rehabilitation has been found necessary because of approximately 2,000,000 men who have been examined by Selective Service since its inception. 1,000,000 have been rejected for physical or mental defects. Approximately 100,000 of these men have remedial defects. If these were remedied, we could supply the Army with almost ten divisions of men which would be an undoubted asset in our present effort.

When the rehabilitation program is instituted in Iowa, a registrant who has a remedial medical or dental defect will be called into the local board office, and the local board physician or dentist will be present. The registrant will be notified that he has a remedial defect which if repaired will make him liable for service in the armed forces. He will be asked if he is willing to have this defect remedied. In the event he does not, he states his reasons; the information is forwarded to these headquarters and thence to National Headquarters, and

authority will be granted to induct him with his defects waived.

However, if he states that he is willing to have his defects remedied, he is asked to designate the physician, dentist or facility in his community to whom he desires to go for treatment. If the doctor or dentist whom he indicates is on the approved list, he will be sent to him for an estimation of the cost or the amount for which the physician or dentist will remedy the defect. This is returned to the local board, and if the local board or local board physician or dentist feels the amount is reasonable, the request is forwarded to State Headquarters for approval. After the approval is received by the local board and the work authorized, it is done as early as possible, and the local board physician or dentist must pass on the work as to its quality and completeness. If satisfactory, he approves the bill and it is sent to State Headquarters for payment.

The rehabilitation work must be done by doctors and dentists who are on what is known as the approved list. It is being prepared at this time by both the dental and medical societies. One of the essential requirements for a doctor's or dentist's name to appear on the approved list is membership in the state and national societies. It is not necessary at this time for anyone to write to State Headquarters of the Selective Service System asking to be placed on this list since that automatically will be done if he is in good standing with his county, state and national organizations.

As soon as these lists are completed, proper forms will be sent to all doctors and dentists to ascertain whether they desire to do this work when it is inaugurated in the state of Iowa.

FIFTY YEAR CLUB

Last year the State Society organized a Fifty Year Club to pay honor and tribute to those physicians who had practiced medicine for fifty years or more. Fifty-three physicians were enrolled last year, a large number when one considers the years of service involved. These men have passed through a stirring era in the history of medicine, and have helped write a chapter of great progress in the practice of medicine.

This year we have added thirteen names to the roster. There are undoubtedly others who should be so honored. The list of members is given below, and the State Society hopes that if there are others who are eligible, they or their friends will notify the central office.

We congratulate these physicians, our colleagues, upon their contributions to medical science, and we extend to them our best wishes for the years which are ahead.

*From the Committee on Medical Preparedness.

ROSTER OF MEMBERS

Watson W. Beam.....	Rolfe	William E. Marsh.....	Eldora
Thomas F. Beveridge.....	Muscatine	John McDannell.....	Nashua
Walter L. Bierring.....	Des Moines	Bernard A. Michel.....	Dubuque
George Boody.....	Independence	Charles W. Miller.....	Preston
Eric N. Brown.....	Marengo	Ernest M. Mills.....	LeGrand
John F. Brubaker.....	Hubbard	Giles C. Moorehead.....	Ida Grove
Frank E. Burbank.....	Pleasantville	Charles H. Morse.....	Eagle Grove
Andros Carson	Des Moines	Mark A. Newland.....	Center Point
Elmer J. Cole.....	Woodbine	David T. Nicoll.....	Mitchellville
Robert R. Davisson.....	Winterset	Christian Nysewander.....	Des Moines
John C. Dennison.....	Bellevue	William Pfannebecker.....	Sigourney
Martin E. Dittmer.....	Colesburg	Myron Phelps.....	Van Wert
William L. Downing.....	Moulton	Norman W. Phillips.....	Clear Lake
Charles C. Fowler.....	Lovilia	J. William Presnell.....	Scranton
Otto A. Geeseka.....	Mt. Pleasant	John Riley.....	Exira
Samuel T. Gray.....	Albia	Wentzle Ruml.....	Cedar Rapids
Benjamin C. Hamilton.....	Jefferson	Joseph H. Sams.....	Clarion
Conda C. C. Heady.....	Bloomfield	Walter E. Scott.....	Adel
Fred H. Howard.....	Strawberry Point	Amos G. Shellito.....	Independence
Charles A. Hurd.....	Northwood	Ferdinand J. E. Smith.....	Milford
Herbert M. Huston.....	Ruthven	Frank S. Smith.....	Nevada
William Jepson.....	Sioux City	Franklin A. Stevens.....	Belmond
Albert P. Johnson.....	Sigourney	Edward F. Strohbehn.....	Davenport
Jared D. Kerlin.....	Des Moines	Frederick E. Vance.....	Eddyville
Frank J. Kribs.....	Elkport	Karl Vollmer.....	Davenport
Fred G. Ladd.....	Cedar Rapids	Herman J. von Lackum.....	Dysart
Nimrod J. Lease.....	Crawfordsville	John W. Wailes.....	Davis City
William S. Lessenger.....	Mt. Pleasant	Fred L. Wells.....	Des Moines
Ellis G. Linn.....	Des Moines	Harry E. Woods.....	Birmingham
David N. Loose.....	Maquoketa	Henry C. Young.....	Bloomfield

SPEAKERS BUREAU ACTIVITIES

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF JUNE

Marshalltown Hotel Tallcorn 6:30 p. m.	June 2	The Sulfonamides Alexander E. Brown, M.D., Rochester
Newton Hotel Maytag 6:30 p. m.	June 9	Office Gynecology John H. Randall, M.D., Iowa City
Carroll Hotel Burke 6:30 p. m.	June 18	Hypertension Walter F. Kvale, M.D., Rochester
Gladbrook Legion Hall 6:30 p. m.	June 25	Infant Feeding—Also Sound Movie, "When Bobby Goes to School" Arnold M. Smythe, M.D., Des Moines

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF JUNE*

Cedar Falls Sartori Hospital 6:30 p. m.	June 2	Diseases of the Gallbladder R. Russell Best, M.D., Omaha
Atlantic Atlantic Hospital 6:00 p. m.	June 11	The Diagnosis of Poliomyelitis John A. Toomey, M.D., Cleveland

*Three recordings were furnished medical groups during May.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee, Dexter, Iowa*

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

REPORT OF THE STATE PROGRAM COMMITTEE

Early in August, 1941, the chairman invited her committee and the president, Mrs. W. R. Hornaday, to luncheon after which the suggested program for the year was outlined. In accordance with the recommendation of the National Program Committee, the topic "Nutrition" was chosen and arranged under seven heads, namely: The Buying of Foods; The Protective Foods; The Preparation of Our Foods; The Fortifying of Our Staple Foods; Feeding the Various Age Levels; Food in Preventive Medicine; and Food in Curative Medicine. To supplement the topics, a list of pertinent articles with sources was prepared for the convenience of those persons desiring to read or present lessons.

Because the questionnaire returns have been far from one hundred per cent, it is hard to make definite statements as to the number of auxiliaries which used the program or the number of educational meetings held. However, the following general conclusions may be drawn. Most of the auxiliaries have had at least one educational meeting; several have had such meetings regularly; a few reported that their members were studying nutrition in lay groups in their respective communities. Many doctors' wives have furthered our program by planning health projects in conjunction with the local parent-teacher association, the Farm Bureau or the Federated Women's Club. It is gratifying to note that topics from previous programs, such as mental health, cancer, new developments in medical science and child welfare were used by some groups. One hundred copies of an article on Physical and Mental Health based on our program material are now being used in some of the Polk County Home Nursing Courses.

In addition to preparing the program outline, approximately 100 posters of "Doctors at Work" and forty health pamphlets from the Department of Education of the American Medical Association were given to the laity. An article on hospitalization insurance was presented in the News Page and in a letter to auxiliaries the recommendations of our National Program Chairman, Mrs. Hibbitts, were outlined.

The chairman deeply appreciates the helpful co-operation of her committee, Mrs. Ernest E. Shaw,

Mrs. James E. Dyson, Mrs. Lee E. Rosebrook and Mrs. Henry G. Decker; the assistance of Dr. Jeanette Dean-Throckmorton of the Iowa State Medical Library in selecting source materials; and the inspiring guidance of the president, Mrs. W. R. Hornaday.

Mrs. A. G. Felter, Chairman

REPORT OF THE PUBLIC RELATIONS COMMITTEE

With health recognized as of paramount importance both to troops and civilians, one of the prerequisites for winning the war, the relation of the Women's Auxiliary of the Iowa State Medical Society to Iowa women in general becomes more and more important. Since our husbands are those upon whom the health of Iowa depends, we, the wives of these doctors, become those upon whom the women we meet socially, and more especially in our clubs, depend for health leadership. It is right that they should do so. Surely no other group of women should be expected to have more interest in the problems relating to the health of Iowa people. Now is the time for us to assume that responsibility. Each of us should choose one medical interest. I emphasize "one" because I believe most efforts are spread so thinly that they are valueless; besides, there is real satisfaction in having done one thing well. In order to get this satisfaction and accomplish our purpose, it is necessary to master the subject of our choice, and then from the fullness of our hearts carry it to as many persons as we can. I am assuming that our auxiliary advisor approves our purpose and course of action.

I shall now report the work of the Public Relations Committee of which I have been chairman. My associates, Mrs. R. G. Hinrichs of Manson, Mrs. R. M. Needles of Atlantic, Mrs. E. C. McClure of Bussey, and Mrs. S. S. Westly of Manly, have each done what lay closest to her heart. Each effort will suggest something that an auxiliary member may do. Mrs. Hinrichs believes that she has developed an interest in health in her community because a Federated club in Manson included a health talk in its program this year. In addition, she advertised the Health Radio Broadcasts from WOI and WSUI. Mrs. Needles has boosted Red Cross First Aid Classes. More than 150 enrolled in the standard First Aid Classes in Atlantic this winter. Mrs. McClure

has herself given a talk on Nutrition to an American Legion Auxiliary. Mrs. Westley has, I think, won the laurel wreath. Mrs. Westley has been interested in cancer control for a number of years. This year she organized three Iowa districts in northern Iowa for the Women's Field Army, and has now been appointed Vice Commander for Iowa of this army.

I should like to commend the ex-officio member of my committee, Mrs. Hornaday, our president, for the public relations work she did at the Iowa State Fair. She had a table in the State Health Department section, showed *Hygiea*, explained nutrition charts and talked "Essay Contest" every day of the Fair. Together, Mrs. Hornaday and myself brought Dr. W. W. Bauer, Educational Director of the American Medical Association, to Des Moines. He gave three excellent talks which I had the pleasure of hearing. I recommend Dr. Bauer as a speaker for large audiences.

Mrs. Hornaday has given me an extra minute to speak of my own medical interest. For some time I have known of the concern of the State Department of Health over the disgraceful smallpox record in Iowa. The chart before you will readily show you our shame. Here you see Iowa with its two and one-half million people; here New York and her five neighboring states with their 32,000,000. In 1940, Iowa had 412 cases of smallpox reported, while New York and her five neighboring states had not a single case. In fact, in 1940, Iowa excelled all other states except Minnesota in the number of smallpox cases reported. Knowing this deplorable Iowa record, the State Department of Health introduced a bill into the 1941 legislature making vaccination against smallpox necessary before admission to school. The bill failed to pass.

In January, 1943, another bill, whose purpose is to banish smallpox from Iowa by means of compulsory vaccination, will be introduced into the legislature. This bill is to be sponsored by the Iowa Federation of Women's Clubs and will be written by their legislative committee in collaboration with the State Department of Health. I have chosen the passage of this bill as my special interest. This activity has the approval of the state society. Will those of you who have as yet no burning medical interest join me in the labor and the toil necessary to make this bill a law? Anna T. A. Glomset, Chairman

REPORT OF THE PRESS AND PUBLICITY COMMITTEE

Early in the concluding auxiliary year, blanks were sent to each county auxiliary president for use in sending reports of meetings to the state press and publicity chairman. With the blanks went a letter suggesting that they be put in the hands of the secretary and that a report be filed on them and sent to me following every meeting of each auxiliary. These blanks were compiled, and not without effort by our president, Mrs. Hornaday, the state medical office staff, and your press and publicity chairman. Some auxiliaries complied with our request, some did not. It was gratifying, however, to note that this

year's reports exceeded those of last year and we hope that this increase will continue until all auxiliaries are sending accounts of their activities to our news section.

One of the questions sent to me for my report to the national chairman of press and publicity was, "How many articles were sent to your state journal?" In counting them, I found there were 108. This was a short year, too, because our convention is being held one month earlier than usual. Among the articles published this year were accounts of the accomplishments and plans of the various officers and committee chairmen of the state organization. Mrs. Chapler's book reviews have appeared each month. These are a valuable contribution to our section, because she reviews current books of medical interest.

The war has affected our department. We have been conscious of its effect upon many of our auxiliary members and we have urged doctors' wives to do their utmost in the women's field of war activities.

It was interesting to note that in the last issue of the *Bulletin*, the publication of our National Auxiliary, four articles from our Iowa Auxiliary News were reprinted, namely: Mrs. Felter's Suggested Program for 1941-1942; Mrs. Hornaday's Account of the Iowa Nutrition Conference, both of which appeared in the October JOURNAL; Mrs. Harnagel's article entitled, Studies Related to Medical Legislation, which was published in the December section; and Mrs. Chapler's book reviews from several issues were combined and published under the one heading, "Book Notes."

I feel that there is a valid need for the Auxiliary News department, and with more effort expended upon it, it could become a still more useful instrument. County auxiliaries should feel more responsibility in contributing accounts of their meetings and activities. An exchange of ideas is interesting and helpful. State officers and department chairmen should make more use of the section. They should present their causes more frequently, even though more briefly. Terseness attracts.

We are grateful to all who have supplemented our efforts in presenting the Auxiliary News, and trust that under new leadership the press and publicity department will go forward to greater service and effectiveness.

Mrs. H. I. McPherrin, Chairman

REPORT OF THE COMMITTEE ON LEGISLATION

As we approach the end of another auxiliary year the time comes to make a record of the year's accomplishments, but since you all know, perhaps, that we are asked by the state medical society not to take the initiative in matters of legislation, but rather to await their instructions and advice as to procedures of which there were none this year, and inasmuch as our state legislature did not convene this past winter, there has been very little we could do other than distribute literature on medical legislation. This has been done through our state office.

However, your chairman was asked to contribute an article on legislation for our Fall Board meeting which later was published in our Woman's Auxiliary News in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY and also in the *Bulletin* of the Women's Auxiliary to the American Medical Association. In this article which was entitled Studies Relating to Medical Legislation I aimed to emphasize three important points which I feel, with your permission, I should like to repeat.

1. Study to understand the practical workings of our government and avail ourselves of all political influences.

2. Inspect and scrutinize closely all candidates for public office, particularly legislative offices, both state and federal.

3. Remember that the character and type of our law-making officials can render either good or bad laws.

Therefore, if we, the women of the Iowa State Medical Auxiliary, are going to carry our share of responsibility for the maintenance of good medical government, let us avail ourselves of all literature along medical lines and become more intelligent citizens in order to be better equipped to assist our husbands in this troubled world.

Mrs. Edward J. Harnagel, Chairman

REPORT OF THE BULLETIN COMMITTEE

As chairman of the Bulletin Committee, I submit the following report. We have to date sixteen subscriptions to the *Bulletin* and have ordered two dozen postconvention issues at the special cut rate of \$1.75 per dozen. One dozen of these issues were included in the president's envelope of helpful material sent by her to the county presidents early in the year. The other dozen issues were bought by the Polk County Medical Women's Auxiliary and placed in the hands of the officers and standing committee chairmen that they might peruse it and thus know their bulletin better.

As you all know, the *Bulletin* is the official mouth-piece of the National Women's Medical Auxiliary and takes the place of the old news letter sent out by the national president to the state and county auxiliaries. The *Bulletin* is published four times a year and subscription prices are \$1.00 per year. Let us all take the *Bulletin* and thus be informed members of the Woman's Auxiliary to the Iowa State Medical Society.

Mrs. Tom B. Throckmorton, Chairman

BOOK NOTES

Book lists are crammed with titles concerned with international events, economics, gardening, canning, first aid, and how to be successful army or navy officers' wives. With all of the defense projects on hand in which doctors' wives and hosts of other women are engaged, it is not to be expected that there would be much time for reading the limited list of books which have to do with medicine. However, among the very new books worthy of attention are the following.

Do You Want to Be a Nurse? by Dorothy Sutherland, R.N., is an example of the fact that the war has brought nursing as a profession to the fore and this book, written by the editor of "R.N.", the nursing magazine with the largest circulation in the world, is a realistic study of nursing with emphasis on background, training and personality traits necessary for success. A comprehensive list of training schools is included.

From the personal angle we have *Northern Nurse* by Elliott Merrick. Australian Kay Austen, the author's wife, went to Labrador to serve as a trained nurse and found herself in the capacity of physician, anesthetist, dietitian and surgeon as well. This book is exciting, inspirational and authentic.

New books in the child guidance field include *Psychotherapy With Children* by F. H. Allen, M.D., and Dorothy Gordon's *All Children Listen*. The first book shows how children with personality and behavior difficulties can be aided to help themselves. The second book is an appeal for worthwhile radio programs for children and contains a survey of the development of children's programs in the United States, England, Russia, Germany and Italy.

In addition to the excellent handbook in first aid, standardized by the Red Cross, there are Dr. D. B. Armstrong's *First Aid Manual* and Wenger and Sense's *First Aid Primer*. Both of the latter books contain material on air raids and other war emergencies.

Mrs. K. M. Chapler

SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.

WSUI—Fridays at 9:15 a. m.

June 3-5 Summer Complaint

George J. Klok, M.D.

June 10-12 Vacation Accidents

John T. Hecker, M.D.

June 17-19 Vitamins—Their Use and Abuse

Preston E. Gibson, M.D.

June 24-26 Hay Fever

Donald W. Leik, M.D.

Twentieth Annual Convention of the Woman's Auxiliary to the

American Medical Association

Headquarters—Haddon Hall
Atlantic City, New Jersey
June 8-12, 1942

Atlantic City extends a hearty welcome
to you

SOCIETY PROCEEDINGS

Bremer County

The combined monthly meeting of the Bremer County Medical Society and the staff of St. Joseph Mercy Hospital was held at the Fortner Hotel in Waverly, Monday, April 27. The program consisted of a new film on Sulfonamide Therapy.

O. S. Blum, M.D., Secretary

Cass County

The Cass County Medical Society and the staff of the Atlantic Hospital met jointly at the hospital in Atlantic, Thursday, May 14. The members heard a recorded lecture on The Macrocytic Anemias by William P. Murphy, M.D., of Boston, Massachusetts.

Cerro Gordo County

Dr. Lee R. Woodward of Mason City, president elect of the Iowa State Medical Society was honored at the recent meeting of the Cerro Gordo County Medical Society held at the Mason City Country Club, Tuesday, May 12. The scientific portion of the program was furnished by John C. Parsons, M.D., of Des Moines, who spoke on Tuberculosis and the General Practitioner.

C. O. Adams, M.D., Secretary

Davis County

Members of the Davis County Medical Society and their wives met at the Royal Cafe in Bloomfield, Friday, May 1, for a dinner meeting which was addressed by Channing G. Smith, M.D., of Granger, on Medical Allowance for Old Age Recipients.

Greene County

The regular monthly meeting of the Greene County Medical Society was held at the hospital in Jefferson, Thursday, May 14. George E. Mountain, M.D., of Des Moines, spoke on The Management of Essential Hypertension.

John R. Black, M.D., Secretary

Johnson County

Meeting in regular session Wednesday, May 6, at the Jefferson Hotel in Iowa City, members of the Johnson County Medical Society heard the following papers: Trichomonas Vaginitis: Recent Experimental Progress, Ray E. Trussell, M.D.; and Some Unusual Bone Lesions, R. T. Tidrick, M.D.

A. L. Sahs, M.D., Secretary

Monroe County

Under the sponsorship of the Monroe County Medical Society a meeting on cancer control, open to the public, was held in Albia, Friday, May 15. Julius S. Weingart, M.D., of Des Moines, spoke on the Treatment and Diagnosis of Cancer, and showed moving pictures on the subject.

Tama County

George E. Mountain, M.D., of Des Moines, addressed the Tama County Medical Society on High Blood Pressure, at a meeting held in Traer, Thursday, April 30.

Webster County

Robert R. Kierland, M.D., associate director of dermatology at the Mayo Clinic, Rochester, Minnesota, was the speaker of the evening at the meeting of the Webster County Medical Society held at the Warden Hotel in Fort Dodge, Wednesday, April 22. His subject was Common Skin Diseases and Industrial Dermatitis. His lecture was illustrated with colored slides and at the close of his talk he presented a colored motion picture on Psoriasis.

Woodbury County

The May meeting of the Woodbury County Medical Society was held at the Martin Hotel in Sioux City, Thursday, May 21. Following the six-thirty dinner, Clarence Dennis, M.D., professor of surgery, University of Minnesota Medical School, Minneapolis, delivered an address on Intestinal Obstruction.

W. K. Hicks, M.D., Secretary

Iowa Clinical Medical Society

Holding its semi-annual meeting Saturday, May 16, at the State University of Iowa, College of Medicine, in Iowa City, the Iowa Clinical Medical Society elected the following officers: Dr. Elmer G. Senty of Davenport, president; Dr. Ernest E. Shaw of Indianola, vice president; and Dr. J. Stuart McQuiston of Cedar Rapids, secretary and treasurer.

Iowa Clinical Surgical Society

Dr. Henry A. Gray of Keokuk was named president of the Iowa Clinical Surgical Society at the semi-annual meeting of that organization held in Keokuk, Saturday, April 4. Other officers are: Dr. Kenneth L. Johnston of Oskaloosa, vice president; and Dr. Donald C. Conzett of Dubuque, secretary and treasurer.

PERSONAL MENTION

Dr. Francis J. Warner has recently joined the staff of The Retreat in Des Moines, to replace Dr. Howard V. Turner who is serving in the Army Medical Corps. Dr. Warner, formerly of Chicago, comes to The Retreat after a year of service in neuropsychiatry in the University of Toronto, Faculty of Medicine.

Dr. Donald McElderry, formerly of Ottumwa, has located in Wilton Junction, where he is taking over the practice of a retired physician. Dr. McElderry practiced in Agency for eight years, and in Ottumwa for the past twenty-five years.

Dr. Emerson J. Steenrod of Iowa Falls, spoke before the Mason City Rotary Club, Monday, May 4, at the regular noon meeting held at Hotel Hanford in Mason City. Dr. Steenrod's subject was "Life Line versus Waist Line".

Dr. Stewart H. Cook, who has been practicing in Rock Rapids for the past six months, has located in Doon. Dr. Cook had practiced in Randolph, Nebraska, for thirteen years before coming to Iowa last year.

Dr. Brownlow B. Miller of Tabor was guest speaker for the Hamburg Kiwanis Club, Thursday, April 16. Dr. Miller spoke on "Cancer Control" in connection with the statewide campaign in Iowa during the month of April.

Dr. Frederick C. Armstrong has located in Creston, where he will limit his practice to internal medicine and pediatrics. Dr. Armstrong comes to Creston from Red Oak where he had practiced for seventeen years.

Dr. Leslie V. Schroeder of Walcott gave a talk on "Blood Plasma as Used by the Red Cross and Armed Forces", for members of the Walcott American Legion at their regular business meeting Wednesday, April 29.

Dr. Hugh G. Cleary, who has practiced for some time in Fort Madison, has left that city and moved to Parsons, Kansas, where he will take up government duties on the medical staff of the ordnance plant there.

Dr. John F. Loosbrock, who has recently moved from Lacona to Perry, addressed the Hi-Y meeting in Perry, Thursday, April 23. He spoke on "Mental Health and Social Diseases".

Dr. Lester R. Hegg of Rock Valley addressed the regular meeting of the Women's Club in Rock Valley Friday, April 10, on "Health and Hospitalization".

Dr. William F. Crew has moved to Greenfield from Massena, where he has been practicing for the past four years.

Dr. Leo H. LaDage of Davenport, presented an illustrated lecture on "Plastic Surgery" at the noon meeting of the Davenport Exchange Club at the Hotel Blackhawk Friday, May 22.

Dr. Elias N. Osnes, who has practiced medicine in Readlyn for the past twenty-four years, has located in Albany, California, where he will continue in his profession.

Dr. Arthur Steindler, head of the orthopedics department of the State University of Iowa, College of Medicine, Iowa City, was guest speaker at a meeting held in Omaha, Tuesday, May 26. The meeting was sponsored by the American College of Surgeons for medical and hospital personnel in Nebraska and Iowa to bring them the latest official information on war medicine and surgery.

DEATH NOTICES

Bower, Edward L., of Guthrie Center, aged seventy-seven, died May 5 after a short illness. He was graduated in 1886 from the University of Michigan Medical School, Ann Arbor, and at the time of his death was a Life Member of the Dallas-Guthrie and Iowa State Medical Societies.

CHANGES OF ADDRESS

Your central office endeavors at all times to maintain an accurate up-to-date mailing list of the members of the Iowa State Medical Society. It is essential that we do so, in order that members may receive the JOURNAL each month and other important communications from the State Society.

For this reason the JOURNAL earnestly solicits the cooperation of individual members and county society secretaries. Members can do much to insure the accuracy of our mailing list by informing the JOURNAL office of changes of address when they enter the service. County society secretaries are perhaps in the best position to learn of changes of locations in their respective counties, and it is hoped they will forward these changes promptly. Communications should be addressed to the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, 505 Bankers Trust Building, Des Moines, Iowa.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. TOM B. THROCKMORTON, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

DR. WALTER L. BIERRING, Des Moines

DR. R. T. LENAGHAN, Clinton

DR. HENRY G. LANGWORTHY, Dubuque

Medical History of Webster County

By WILLIAM W. BOWEN, M.D.,
Fort Dodge, Iowa

(Continued from last month)

Dr. James H. Bruce

Dr. Bruce was born in Ohio, October 3, 1877; his parents removed to Iowa when he was four years old. He attended the country schools, the high school in Rolfe, and Morningside College in Sioux City. He was graduated from Hahnemann Medical College and took a year's work at Illinois University, the College of Physicians and Surgeons in Chicago, in 1906. He then returned to Iowa and located at Dickens, where he practiced successfully until 1929, when he came to Fort Dodge where he is still working. He has taken frequent postgraduate courses at the Polyclinic Hospital in Chicago, Harvard University, Cook County Hospital in Chicago, and Johns Hopkins in Baltimore. He is very successful as an obstetrician, and is often called as a consultant in obstetrics as well as for other things. He is well informed and a good and fair consultant.

Dr. William R. Turner

Dr. Turner was born in Des Moines, September 3, 1884, the son of Robert and Sarah Allen Turner, the father a native of Scotland and the mother a native of Des Moines. His father was of an inventive mind, the Jewett typewriter being one of the products of his labors. The doctor was educated in the schools of Des Moines, and worked in his father's machine shop for a few years. He was graduated from the Drake University School of Medicine in 1908, and practiced in Badger, Webster County until 1918, when he moved to Fort Dodge. In 1938 he took a course in dermatology under the supervision of the United States Public Health Service in Minneapolis, Minnesota. At the conclusion of this course there was no place open in the public health service; he began practicing the specialty of dermatology exclusively and is still doing it. Dr. Turner was married to

Miss Jessie Grigsby in 1906. They had two children; one died, and a daughter, Mrs. Roberta Dangleowsky, is living in Ardmore, New York.

Dr. William Murray Wildman

Dr. Wildman was in Fort Dodge about twelve years. He was a Quaker, the son of William and Asenath Adams Wildman, and he was born on a farm in Hardin County. His mother was a direct descendant of John and John Quincy Adams. The doctor attended the public schools and entered New Providence Academy at New Providence, Iowa, which was a Quaker school. He entered Penn College at Oskaloosa, Iowa, also a Quaker institution, and was graduated as a Bachelor of Science in 1897. He then went to Iowa City and was graduated from the Homeopathic School of Medicine, State University of Iowa, in 1906. He immediately located in Fort Dodge, and practiced successfully until 1918 when he entered the army. He never returned to practice, but remained in the army. He was married to Miss Sadie Polley in Eldora, Iowa, in 1901. Dr. Wildman was a very large man, weighing around 250 pounds. In order to get into the army he had to reduce, which he did by means of long walks and cross-country runs.

Dr. Albert Edward Acher

Dr. Acher was born near Napoleon, Indiana, November 23, 1879. His father was a native of Prussia, Germany, who came to America in 1859, settling first in Minnesota. He was a soldier throughout the Civil War, and after the war he returned to Minnesota. He later moved to Napoleon where he bought a farm and lived on it until he died. His mother then moved to Napoleon. The doctor was reared on the farm and went to school at the Napoleon High School after which he taught school for three years. He

then pursued a literary course for one year in the State University of Indiana and later studied medicine in the same university from which he was graduated as an M.D. in 1905. He interned at the Deaconess Hospital in Indianapolis for one year and came to Fort Dodge in January, 1907. He has lived and practiced here ever since. He was married to Miss Marna Pierson of Indianapolis, Indiana.

Dr. Allie Hoyt Wakeman

Dr. Wakeman was born in Jackson County, Iowa, Februray 17, 1874. Her parents were Stephen and Sarah Catherine Hoyt. She was educated in the public schools and was graduated from Tobin College in Fort Dodge in 1895. She began her medical training in the Women's Medical College in Chicago where she remained one year, then went to Keokuk and entered the College of Physicians and Surgeons, graduating in 1901. She entered the practice of medicine shortly afterward in Fort Dodge where she has lived ever since, retiring from active practice in 1941. She did postgraduate work in the Medical Department of the University of California in Los Angeles in 1920. She affiliated with the medical societies early, belonging first to the doctors' club which was afterward fused into the Webster County Medical Society. She was school physician a number of years. She has done a large obstetric practice and has the unique record of never having lost a mother during obstetrics. She has been a very good and useful member of the community and has acquired a very nice competence. She was married to Clarence Wakeman in 1902. They never had any children, but raised an adopted daughter.

Dr. Wilford E. Alton

Dr. Alton was born in Monroe County, Wisconsin, December 4, 1863. His ancestral home was in Athelstan, England, and his father was born on the ocean on the way to America. The doctor's grandparents located in New York, but subsequently moved to Wisconsin. His father served in the Civil War. He afterwards moved to Minnesota and took part in the Indian troubles following the Spirit Lake Massacre. Dr. Alton's mother was Matilda Barrett Alton, a native of New York. Dr. Alton was nine years old when his father moved to Minnesota. He attended the public schools, Wadena High School and immediately entered the State University of Minnesota. He taught school for three years. He wanted to study medicine, but his father did not approve of the plan and offered him a section of land if he would remain a farmer, so he had to depend on himself. He began his medical studies

in the Chicago Homeopathic Medical College and was graduated in 1896. He located in Estherville, Iowa, and practiced there until 1899 when he came to Fort Dodge. In 1898 he took a post-graduate course in the Chicago Polyclinic Hospital. He was chief of staff of the Webster City Hospital in 1905, it being then a Methodist Hospital. When Mercy Hospital was opened in Fort Dodge he became a member of the staff, but retired from the staff after a couple of years. Since then he has operated his own private hospital in Fort Dodge. He was married to Miss Jennie Salisbury from Estherville, Iowa, in 1898. He is mechanically inclined and some years ago he built a boat with staterooms and accommodations for twelve people. He is a surgeon and well liked by his patients.

Dr. Otto N. Glesne

Dr. Glesne was the son of a minister, Rev. C. and Hannah Glesne, and was born in Aberdeen, South Dakota. He was a graduate from the high school at Decorah, Iowa, attended St. Olaf's College at Northfield, Minnesota, and was graduated from that institution in 1921 as a Bachelor of Arts. He then began his medical education at the University of Minnesota from which he was graduated in 1926. He interned at Fairview, Minnesota, and also at the Detroit Receiving Hospital. He entered the practice of medicine in Fort Dodge in 1926. He was married to Miss Lyla Hovey and they have two children. He is very active in medical circles and is on the staffs of both Mercy Hospital and the Lutheran Hospital in Fort Dodge. Both he and his wife are Lutherans, as was his father.

Dr. George Palmer

Dr. Palmer was born in Marion County, Iowa, October 2, 1871. He received his education in the public schools and was graduated from the Marion High School, and Coe College in Cedar Rapids. He entered the Chicago Medical College from which he was graduated in 1899. He then began the practice of medicine at Rockwell City, Iowa, in May, 1900; after three years he moved to Sibley, Iowa, and was associated with Dr. Frank Hough. He remained for seven years, then he came to Fort Dodge in July, 1910, and practiced for twenty-three years. While in Fort Dodge he served as secretary of the county society for eight years. He was also on the staffs of both Mercy Hospital and the Lutheran Hospital. He also was instructor in the Training School for Nurses at Mercy Hospital for several years. In 1933 he moved to Rolfe, Iowa, and two years later he retired because of ill health. He still lives in Rolfe.

Dr. Thomas J. Dorsey

Dr. Dorsey was born in Cumberland, Iowa, August 2, 1885. He attended the country schools and the high school in Atlantic, Iowa. He was graduated in 1910 from Northwestern University School of Medicine, Chicago. He served one year as an interne in the Postgraduate Hospital in Chicago, and entered the practice of medicine at Clare, Iowa, in 1911. He enlisted in the army in 1918 but was honorably discharged the same year, and came to Fort Dodge where he has been since that time. He has made a success of his practice and takes an active part in all society work connected with medicine. He is a genial and jolly companion and has a long time ahead of him. He belongs to the staffs of both Mercy and Lutheran Hospitals, and has served as chief of staff in both institutions. He is a Roman Catholic and his chief recreation is bowling.

Dr. Joseph E. Galvin

Dr. Galvin was born at Westgate, Iowa, September 18, 1890, and died in Fort Dodge, Iowa, April 18, 1937. He was educated in the public schools and the high school at Sumner, Iowa, and took premedical work at Columbia College in Dubuque, Iowa. He took his medical work at St. Louis University and later did postgraduate work in Columbia University, New York. He interned at the St. Louis City Hospital, and located in Clare, Iowa, where he remained for five years. He then came to Fort Dodge and practiced successfully until his death. He was married to Emily Kearney and they had two children, Jack and Mary Jo. His wife and children still live in Fort Dodge. Dr. Galvin was the fourth doctor to begin his practice at Clare and finally move to Fort Dodge, the other three being C. J. Saunders, E. David Russell and T. J. Dorsey. As Dr. Russell said, "Galvin was the fourth man to graduate from the University at Clare."

Mr. Herman L. Dulaney

Mr. Dulaney is not an M.D. but his influence on the medical profession entitles him to mention. He is a well trained chemist and bacteriologist, and it takes almost as much knowledge to be a good chemist and bacteriologist as it does to be a practitioner of medicine. All the doctors in Fort Dodge depend on Dulaney and he never fails them.

Mr. Dulaney was born in Wayne County, Illinois, and attended the grade school there when his parents moved to Iowa. He was graduated from the high school at Collins, and entered the State University of Iowa where he was graduated in chemistry in 1925. He remained in the university a year longer as assistant biochemist under

R. B. Gibson. He then worked in the University Hospital for two years, and came to Mercy Hospital in Fort Dodge in June, 1927. In January, 1937, he went to the Lutheran Hospital, and is probably the most useful man there. Before he was two years old he had infantile paralysis and it left him with a mighty handicap, although he walks without a cane. The paralysis is mainly in his legs, but his hands are all right and so is his head. He married Miss Esther C. Mukelbert in December, 1928, and they have three fine children.

Dr. Edgar N. Zinn

Dr. Zinn is a Canadian, born in Carrick, Bruce County, Ontario, Canada, October 12, 1886. His parents were also both born in Ontario, Canada. Dr. Zinn attended the public and high schools in Ontario and received the degree of Graduate of Pharmacy from the Valparaiso University, Valparaiso, Indiana; he was registered in August, 1906, in Iowa. He received the degree of M.D. from the Chicago College of Medicine and Surgery, May 1, 1909, and a certificate from the Illinois State Board June 1, 1900, and from Iowa in July of the same year. He located at Thompson, Iowa, October 10, 1910, and remained there until 1913 when he moved to Goldfield, Iowa. He came to Fort Dodge in 1923, and has been a permanent resident since that time. He married Elisa Hansen of Thompson, October 10, 1910. They have one daughter, Marjory Lucille, who married Harlowe R. Zinn, and now lives in Maplewood, New Jersey.

The doctor is a very active personage and a good mixer, has been president of the Kiwanis Club, and surgeon of the Tobin Packing Company. About two years ago he had a Mikulicz's operation and has completely recovered.

Dr. Emerson B. Dawson

Dr. Dawson was born in Higbee, Missouri, October 7, 1900, the son of Thomas H. and Sula Griggs Dawson. His parents moved to Fort Dodge in 1904 so that he received all his primary education in the public schools here, graduating from the high school in 1919. He then entered the University of Minnesota where he remained one year and then enrolled in the State University of Iowa where he took two years premedical work. He entered the Medical School in 1922 and was graduated in 1926. He interned at Anchor Hospital in St. Paul, and entered the Miller Clinic as associate in medicine and surgery. He left the Miller Clinic in 1929 to take a part-time position at the University of Colorado in Denver, but it proved to be a full-time job as pathologist. He did surgical pathology there under Dr. William S. Johnson. He came back to Fort Dodge in 1930

and entered the private practice of medicine. He is now a member of the staff at both Mercy and Lutheran Hospitals. He is a member of Sigma Chi, Nu Sigma Nu, and is local surgeon for the Chicago and Great Western Railway and the Fort Dodge, Des Moines and Southern Railway.

He was married first to Miss Pauline Zander who died and second to Miss Paulyne Breen of Fort Dodge. They have three children, the last two being twins. Dr. Dawson is a very well trained man and has a pleasing personality. He has met with what might be called a phenomenal success here and will go far.

Dr. Lewis L. Leighton

Dr. Leighton was born at Wellman, Iowa, July 15, 1892. He was graduated from the high school in Iowa City, and from the Medical Department of the State University in 1922. He saw Army Service on the Mexican border in 1916, and in World War I in 1918 and 1919, going overseas.

After his graduation in 1922 he interned at Harper Hospital in Detroit. He came to Fort Dodge in 1924 and has been practicing here since. He is a past president of both the Lutheran and Mercy Hospital staffs and is now Director of the Webster County Relief Clinic.

He married Miss Loretta Wicks of Iowa City in 1918 and they have three children, one of which, Robert, is now in service in the Third Armored Division, Camp Polk, Louisiana.

Dr. Ernest M. Kersten

Dr. Ernest M. Kersten was born February 18, 1892, the second youngest of six sons and three daughters of Dr. A. M. and Marie Kersten at De Pere, Wisconsin. His father and two brothers are doctors and one brother is a druggist. Dr. E. M. Kersten was educated in the De Pere public schools and received his M.D. degree in 1914 from Marquette University. He interned at the Milwaukee County Hospital. He was assistant to Dr. A. M. Farrell at Two Rivers, Wisconsin, for two years and came to Fort Dodge in 1916. He did postgraduate work at Harvard and joined the Medical Reserve Corps of the United States Army in Chicago in 1916. He was called into active duty May 25, 1917, and served in the 340th Field Hospital, 310 Sanitary Train, 85th Division, until May, 1919. Almost all of the last year was spent in the Replacement Hospital with the Second Army in France.

He was married to Miss Anne B. Hinzie of Palestine, Texas, in 1917 and they have five children, four sons and one daughter. The three oldest boys are now studying medicine. He returned from France to Fort Dodge and has practiced here since that time. He was granted a

fellowship in the American College of Surgeons in 1930. He is a hard worker, and his particular hobby is scientific farming. He owns five farms in the near vicinity of Fort Dodge.

Dr. Cyrus G. Field

Dr. Field was born in Humboldt, Iowa. His father was a doctor. When the future Dr. Field was a mere boy his mother died and his father remarried. The young man could not get along with the new wife, ran away from home at the age of twelve and ever after that made his own way. He did all sorts of things for a livelihood: among them he became a musician, playing a cornet, and he became so good that he trained small town school bands. One summer he drove a sight-seeing wagon in Yellowstone National Park. In 1909 he went to Iowa City and began the preparation for the study of medicine. He established a store to supply the students with all their needs. It was quite successful and he ran it for some six years. He took two years in Liberal Arts and then entered the Medical School from which he was graduated in 1915 with the degree of M.D. He then entered Winnipeg General Hospital in 1917. In 1918 he did not recover satisfactorily from an attack of pneumonia, and he entered a tuberculosis hospital in Winnipeg for observation. He apparently recovered, and in 1919 returned to Iowa City as instructor in medicine under Dr. Howard. He located in Fort Dodge in 1920. After he had been here a couple of years his health began to break and he went to Rochester where Dr. Judd operated upon him and found tuberculous ulcers of the intestine. He apparently also had tuberculous peritonitis and was finally sent home as a hopeless case. He lived some two years afterward and finally died in Mercy Hospital, April 1, 1927.

Dr. Field was the first internist to locate in Fort Dodge, and he was a good one. He was an excellent student not only in medicine but in other things as well. Notwithstanding his handicaps he left considerable property.

Dr. John C. Shrader

Dr. John Clinton Shrader was born in Iowa City, May 2, 1898, the son of W. E. Shrader and Mary Gunsolus Shrader, and grandson of John C. Shrader, M.D., one of the early physicians and surgeons of Iowa who was one of the founders and long a member of the staff of the College of Medicine of the State University of Iowa. His primary education was obtained in the public schools in Iowa City. In 1920 he was granted the degree of Bachelor of Science from the State University and in 1922 he received the degree of Doctor of Medicine from the same institution. In 1922 and 1923 he served as an interne in the Uni-

versity Hospital, and the following year remained in the same institution as chemist.

From 1924 until 1926 he was assistant resident in medicine at the Peter Bent Brigham Hospital in Boston, Massachusetts. From 1926 to 1927 he was first resident physician of the Emory Division of Grady Hospital in Atlanta, Georgia, associated with Emory University. In November, 1927, he located in Fort Dodge limiting his practice to internal medicine. In 1927 he was married to Miss Louise Plaster of Fort Dodge, and they have one daughter, Joan, born in 1933.

He served as secretary of Webster County Medical Society for five years and as president of the same society for two years.

Dr. Sumner B. Chase

Dr. Sumner B. Chase was born at Waterloo, April 6, 1888. He was the son of Dr. Charles Sumner Chase who was long professor of materia medica and therapeutics in Iowa City and he was the grandson of Sumner B. Chase, long a practitioner at Osage, Iowa. The doctor was graduated from the Medical Department of the State University of Iowa in 1915. He interned in the eye, ear, nose and throat department of the same institution and located in Fort Dodge in 1916. In 1918 he was called to the colors and was commissioned first lieutenant in the Army Medical Corps. He was stationed with the Evacuation Hospital at Chattanooga, Tennessee, and was mustered out in December, 1918. He returned to Fort Dodge and has practiced here ever since strictly as an eye, ear, nose and throat specialist.

He is examiner for the Illinois Central Railroad, the United States Department of Commerce Aeronautical Division, and the Chicago and Great Western Railway. Dr. Chase is a leader in medical circles and socially, and has made a real impression on the profession here. He was married in 1915 to Miss Edith Hoaglin of Mount Pleasant, and they have one daughter, Rosemary.

Dr. Edward F. Beech

Dr. Beech was born and raised near Belle Plaine, the eldest son of a pioneer family. He was graduated from Northwestern University in Chicago in 1914 with the degree of Doctor of Medicine. He served his internship in the Denver County Hospital, Denver, Colorado, and then stayed another year as surgical resident. After returning from Denver he took a course in surgical technic in Chicago and a similar course in New York City. He located in Fort Dodge about the first of the year 1917 as a general practitioner. In March he volunteered and served in World War I one year after which he returned to Fort Dodge, where he

has since limited his practice to general surgery. He was married in 1919 to Miss Ann Garrett.

He is now the Councilor for the fifth district, surgeon for the Northwestern Railroad, the Chicago and Great Western Railroad, the Minneapolis Railroad, and the Interstate Transit and Bus Lines in Fort Dodge. He is affiliated with the American Association of Railroad Surgeons.

He is probably doing more surgery now than any one in Webster County. He is a shrewd business man and has acquired much property in this vicinity.

Dr. Arch S. McMillen

Dr. McMillen was born in Spokane, Washington, in 1908. His parents moved to Lincoln, Nebraska, when he was still a child so that he attended the public schools in Lincoln and was graduated from the University of Nebraska, School of Medicine. He interned at Ancker Hospital in St. Paul, Minnesota, and did special work there in pathology. He came to Fort Dodge in 1933 as pathologist to Mercy and Lutheran Hospitals and has served in that capacity since then. He is doing good work here.

Dr. Paul C. Otto

Dr. Paul Otto was born in Reading, Pennsylvania, in 1892. He was educated in the public schools, Mount Herman Preparatory School and Springfield College in Springfield, Massachusetts, receiving the degree of bachelor of science and also master of physical training. He remained there as physical instructor for three years and entered the Medical Department of the University of Virginia at Charlottesville, where he was graduated in 1929. He interned in the University of Virginia Hospital for one year and entered King's County Hospital in Brooklyn, as resident in obstetrics and gynecology where he remained for three years. His fraternities are Nu Sigma Nu, Phi Beta Kappa and Alpha Omega Alpha. He came to Fort Dodge and began practicing in 1932.

Dr. Harold T. Larsen

Dr. Larsen is strictly a Fort Dodge product; he was born here and has lived here all his life. He was born November 9, 1907, the son of Thorvold, who was born in Norway, and May Larson Larsen, a native of Fort Dodge. He was graduated from the State University of Iowa, College of Medicine, Iowa City. He interned at the Charles D. Miller Hospital in St. Paul, Minnesota, and entered practice here in 1933.

His father was manager of the Oleson Drug Company, but was killed in an auto accident very recently. Dr. Larsen was married to Kathryn Barr of Belvedere, South Dakota, August 2, 1935. He is a fine fellow and a coming young man.

Dr. Homer William Scott

Dr. Scott was born near Danbury, Iowa, December 30, 1892. He entered the State University of Iowa, College of Medicine, and was graduated in 1919. He then interned for one year in internal medicine, one year in surgery and two years in general surgery and urology.

He located in Fort Dodge in September, 1924, and remained about three years. He returned to Iowa City as an instructor in general surgery in 1927. He again located in Fort Dodge in 1930 and limited his practice to general surgery and urology. On August 6, 1930, he married Miss Clara Vaughn Sheehan of Independence, Iowa.

In urology he early took up transurethral prostatic resection and has had a great number of such cases. He is the final authority on questions of urology in this vicinity.

*Dr. Richard C. Sebern**

Dr. Richard C. Sebern was born in Lake City, Iowa, the only son of Thomas H. and Martha Sebern. He received his primary education in the public schools of that city, following which he attended the State University of Iowa, College of Medicine, from which he was graduated in 1904. He was affiliated with Phi Rho Sigma, national medical fraternity. Beginning the practice of medicine in Odebolt, Iowa, he continued successfully in general practice until 1916. At this time he decided to specialize in eye, ear, nose and throat work and he attended the New York Postgraduate Medical School and the Polyclinic Hospital in Chicago. He was associated with Dr. J. B. Naftzger in Sioux City for some time and later located in Cherokee, where he practiced until 1924. Since then he has been a specialist in Fort Dodge.

Drs. Donald and Wilbur Thatcher

The Drs. Thatcher practice in Fort Dodge as partners; Dr. Don practices internal medicine, allergy and pediatrics, while Dr. Wilbur devotes his time to surgery, gynecology and obstetrics.

These brothers are sons of Orville M. and Lillie (Eckersley) Thatcher, and both were born at Luther, Iowa, Dr. Don on March 22, 1913, and Dr. Wilbur on August 24, 1908. In 1915 the family moved to Fort Dodge where Mr. Thatcher engaged in the banking business, insurance and real estate. The doctors have a sister who is married to Dr. W. W. Warren of Humboldt, Iowa. Both doctors received their early education in the

public schools in Fort Dodge. As boys they revered their family doctor, Dr. George Gibson, now retired in Monrovia, California. Dr. Gibson was their friend and neighbor, father-confessor and their inspiring influence in studying medicine. Both boys were graduated from the State University of Iowa, College of Medicine, Wilbur in 1933 and Don in 1937.

The doctors feel indebted to the older doctors here and especially to Drs. Bowen, Evans, Scott, Knowles, Starr and Beeh, the latter being particularly helpful in allowing them to work in his office. After graduation both doctors interned at the University Hospitals in Iowa City, and both continued their work in the same hospital, Dr. Wilbur in pathology, obstetrics, gynecology and surgery, and Dr. Don in internal medicine.

On June 2, 1934, Dr. Wilbur married Miss Bernice Brand and they have two small daughters; Dr. Don married Miss Pauline Holm of Maquoketa, Iowa, June 13, 1937, and they have one daughter.

Dr. Wilbur entered practice in Fort Dodge in July, 1937, and Dr. Don joined him two years later. They are members of the staffs of Mercy and Lutheran Hospitals. Dr. Wilbur is affiliated with Phi Beta Pi medical fraternity. Dr. Don with Alpha Kappa Beta.

Dr. Fred L. Knowles

Dr. Fred Knowles was born at Kingsley, Iowa, May 19, 1888. He attended Oberlin College for two years and the Art Institute in Chicago for two years, and was graduated from the State University of Iowa, College of Medicine, in 1920. He interned at the Children's Hospital in Iowa City under Dr. Steindler for one year, then served as an interne in St. Luke's Hospital in Chicago, under Dr. John R. Porter, Dr. E. W. Ryerson and Dr. Henry B. Thomas for two years and came to Fort Dodge in 1924 to practice orthopedics. He married Miss Catherine Welch and they have two children, Joan aged fourteen years, and Nancy aged eleven years. He belongs to the Alpha Kappa Kappa fraternity.

Doctor Knowles is a remarkable man. He is a good sculptor and a painter of more than common ability, and if he had chosen to remain an artist he would undoubtedly have been successful. In his practice he is an original thinker. There is not a lot of orthopedics to be done here, but he has a large fracture business, and he treats his fractures much better than the average fracture man. He is ingenious and always devising methods of treatment that are superior to those usually used.

(To be continued next month)

*Subsequent to the preparation of this article Dr. Sebern died February 1st, 1942, from a coronary occlusion.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovaes, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

THE 1942 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

BODY MECHANICS IN HEALTH AND DISEASE—By J. E. Goldthwait, M.D., L. T. Brown, M.D., L. T. Swaim, M.D., and J. G. Kuhns, M.D. J. B. Lippincott Company, Philadelphia, 1941. Price, \$5.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy. St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

IMMUNOLOGY—By Noble Pierce Sherwood, M.D., professor of bacteriology, University of Kansas. Second edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$6.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.

COMMUNICABLE DISEASE NURSING—By Theresa I. Lynch, R.N., Ed.D., Instructor in Education, New York University. The C. V. Mosby Company, St. Louis, 1942. Price, \$3.75.

GYNECOLOGY AND FEMALE ENDOCRINOLOGY—By Emil Novak, M.D., associate in gynecology, The Johns Hopkins Medical School. Little, Brown and Company, Boston, 1941.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schaufler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

BOOK REVIEWS

METHODS OF TREATMENT IN POST-ENCEPHALITIC PARKINSONISM

By Henry D. von Witzleben, M.D., Elgin State Hospital, Elgin, Illinois. Grune and Stratton, New York, 1942. Price, \$2.75.

This monograph is a complete review of the literature and evaluation of the various therapies recommended for postencephalitic parkinsonism. The first chapter discusses the differential points of the diagnoses of paralysis agitans, postencephalitic and arteriosclerotic parkinsonisms, which are important in view of the results to be expected in each condition by the treatments outlined.

These consist of chemotherapy, serum therapy, vaccine treatment, intralumbar methods, surgical, fever and roentgen therapies, treatments with medicaments and by physical exercises and calisthenics and alkaloid therapy. The author has had the most experience in the last method which he discusses at length as the Bulgarian root treatment with excellent results. The Bulgarian treatment was discovered in Bulgaria by a lay herbalist by the name of Raeff about fifteen years ago. It refers only to the use of a total extract from the roots of *Atropa belladonna*. Each case must be treated individually to determine the optimal dose of this powerful poison. Dr. von Witzleben reports 71 per cent of a total number of 827 cases as able to return to work following treatment.

In view of the epidemics of encephalitis which occur rather frequently, and which are followed by the unfortunate sequelae of postencephalitic parkin-

sonism, this treatment offers hope for these pitiful patients.

E. W. A.

THE 1941 YEAR BOOK OF GENERAL SURGERY

Edited by Evarts A. Graham, M.D., professor of surgery, Washington University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

This Year Book is the outstanding abstract of the surgical literature for 1941. Due to the war, the material reviewed is chiefly from American, British, Canadian and Australian journals. Very little criticism can be found in the author's choice of material or in the manner of summarizing several hundred outstanding articles which have appeared in surgical publications. Since 1940, the literature of orthopedic and traumatic surgery, formerly included in this volume, has been reviewed and published in a separate work, "The Year Book of Industrial and Orthopedic Surgery".

The pros and cons of many controversial subjects are presented in such a way as to be most thought provoking. For instance, a new incision for felon is described by one surgeon; a bitter criticism of this technic is later presented by another surgeon, and a final rebuttal is given by the first man in defense of his new operation. Because of the careful selection and arrangement of material, and the pertinent remarks by the editor, this Year Book is not only most instructive but very readable.

J. M. B.

THE BLOOD BANK AND THE TECHNIQUE AND THERAPEUTICS OF TRANSFUSIONS

By Robert A. Kilduffe, M.D., Director, Laboratories, Atlantic City Hospital; and Michael DeBakey, M.D., assistant professor of surgery, School of Medicine, Tulane University of Louisiana. The C. V. Mosby Company, St. Louis, 1942. Price, \$7.50.

That this volume is a comprehensive resumé of all the aspects of the problems in the use of whole blood and its substitutes is evidenced by the fact that the bibliography contains 2,882 references. The authors present the views of most workers on these problems and also recount their own experiences in this field.

The chapters on history, rationale, indications, contraindications and complications of blood transfusion, and the chapter on shock and the use of plasma transfusions will be of interest to all physicians.

The remainder of this work dealing with the technical aspects of blood transfusions, the preparation of serum and plasma and the establishment of blood banks will be of value to workers engaged in these types of work.

E. C. W.

DIRECTORY OF MEDICAL SPECIALISTS

Certified by American Boards. Second edition. Columbia University Press, New York, 1942. Price, \$7.00.

Since the first edition of this volume more than 4,000 doctors have taken their board examinations. This edition, therefore, contains complete information on more than 18,000 certified diplomates. The book has become increasingly useful to Washington officials, army and navy administrators, and local and regional selective service executives.

A separate section is devoted to each American Board, with geographic and biographic listings of its diplomates. In addition, there is a complete alphabetic list. The organization and examination requirements of each board are explained in full. These features make the directory invaluable to doctors, hospitals, social agencies, libraries, medical societies and business organizations.

D. K.

THE 1941 YEAR BOOK OF PATHOLOGY AND IMMUNOLOGY

Edited by Howard T. Karsner, M.D., professor of pathology, Western Reserve University; and Sanford B. Hooker, M.D., professor of immunology, Boston University School of Medicine. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

A discussion of the pathology of shock by Virgil H. Moon is only one of the many important reviews of general interest contained in the 623 pages of this second Year Book of Pathology and Immunology. The book would seem to be almost indispensable to the pathologist, but it is worthy of the perusal of those who practice many of the other branches of

medicine. There are excellent discussions, for example, of congenital heart disease, of the common infectious diseases, of intercapillary glomerulosclerosis in diabetes, of histoplasmosis of Darling, of giant cell tumor of bone, of virus pneumonitis, of Banti's syndrome, of carcinoma of the breast, of circulatory changes in bone and of the electron microscope.

R. F. B.

SURGICAL PRACTICE OF THE LAHEY CLINIC

From The Lahey Clinic, Boston, Massachusetts. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

The surgical methods practiced in The Lahey Clinic are procedures which have stood the test of time and have been selected by the surgeons of that institution because of their safety, good results and wide applicability. In this volume we have available a description of these surgical technics in a dozen fields of general surgery and the surgical specialties.

Many of the chapters of this book have appeared previously as articles in surgical journals or the *Journal of the American Medical Association*. The value of this work lies in the fact that these many excellent articles are now included in one volume for the convenience of the surgeon. The reader is at once impressed with the careful organization of subject matter and the many beautiful drawings by the medical artists of The Lahey Clinic. Here is a surgical text which can be recommended without reservations and whose subject matter cannot be duplicated elsewhere.

J. M. B.

CLINICAL HEMATOLOGY

By Maxwell M. Wintrobe, M.D., associate in medicine, Johns Hopkins University. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

In this book the author brings together all the important knowledge in the field of hematology today. Each disease is discussed completely and yet concisely enough so that the entire subject of blood diseases is found in this one volume of 750 pages.

Believing that too many "shotgun" prescriptions or anti-anemic remedies are prescribed by physicians before a definite diagnosis has been made as to the type of anemia present, the author places much emphasis on the proper diagnosis and differential diagnosis before treatment is started.

To arrive at the proper diagnosis, he considers laboratory procedures in detail which can be used by the physician in his office laboratory. The author adheres to the accepted terminology which is admirable, because the field of hematology is often further confused by new terms. The blood findings of forty-six species of animals, including non-mammals, are found in the appendix.

This excellent volume on hematology can be highly recommended to the general profession.

E. E. K.

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CESAREAN SECTION*

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A discussion of cesarean section within the restrictions imposed for this presentation requires a limitation of the field and an arbitrary choice of approach. A discussion of some of the practical problems which have to do with indications and results has been chosen. Detail will yield place to the statement of broad general principle since experience teaches that here lie the most important practical possibilities.

It should be said at the outset that much of the argument and recrimination which has stormed about this subject is more productive of confusion than of factual information. The teacher of medicine has all too often hypnotized himself with well meant phrases and dicta to which he has held with all the tenacity and about as much objectivity as a Don Quixote. Out of all this has risen the general impression that most cesarean sections except our own are without indication. This is, of course, not true and it is a bad point from which to start an objective evaluation of the problem.

A second point worth noting is that changing technics, new supporting methods and new discoveries may change almost over night the results which can be obtained by a procedure and so change its indications. As examples of applicable changes in these three groups might be mentioned the present-day results of elective cesarean section, the immediate availability of blood for transfusion from a well organized blood bank and the new knowledge of the pelvis derived from x-ray study. An abstract discussion of whether cesarean section is good or bad for a given condition has no place in the decision. On the contrary, a decision is reached after an exhaustive study of the patient and the finest details of her problem, followed by a cold mathematical calculation of the dangers and advantages in terms of the results of cesarean section and of the alternative possibilities. Since

these mathematical calculations will change from time to time with advancing knowledge it is necessary to preserve an unbiased mind and continually to re-examine the reality of the basic features of our decisions.

There is one other matter which must be considered, however unpleasant. The safety of the pregnant woman and her child is very largely dependent upon the prophetic skill of her physician. This is not a mystic art, possible only in the few, but is to a very large extent based upon the collected data of careful examination. All can take complete histories and do accurate general physical examinations. Almost all of the required laboratory procedures are readily available. Accurate mensuration of the pelvis is obviously essential, and most abnormalities, leaving out of consideration for the moment their significance, may be found with ease. If interpretation is confusing, expert help is always available. The great hurdle is the completeness of the original examination. There are two unforgivable sins in clinical medicine. One of these is pretending to knowledge and skills which are lacking and the other is clinical laziness. Here lies the solution to the greatest part of the problem of cesarean section and as well of most other problems of the application of medical knowledge.

The objection to the indiscriminate use of cesarean section lies in the fact that in the best of circumstances in the otherwise normal woman, elective section is approximately ten times as dangerous as delivery from below. Plass¹ has shown that the maternal mortality rate as it is applied does not approach the ideal elective section rate of one per cent but is actually between five and ten per cent. Even higher rates have been reported. Two conclusions then seem justified. From the mother's point of view alone, unnecessary cesarean section unjustifiably increases her risk. In the second place, something is sadly wrong with the circumstances under which cesarean section is being carried out if one assumes, as is reasonable, that the ideally handled material is comparable to the country-wide material. There is reason to

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hope that the country-wide mortality rate is dropping but it is clear that it is still much too high. Keetel² in a study of 200 cesarean section deaths, showed that in 117 of them there were contraindications or no indications for the operation. His data do not include the details to support the indicating diagnosis in the remainder so it is quite possible that even more should not have been exposed to cesarean section. One maternal danger then is that unnecessary or unindicated cesarean sections are being performed and that the mortality of the operation as it is presently being used is too great.

Little has been said about the other individual involved, the baby. Here, morbidities associated with delivery are at least as serious as mortalities. While it is clear that a rational aim is to decrease the incidence of section for the sake of the mother, it must be asked if some extension of the indications in the interests of the child might not make for a desirable improvement. This will be discussed in relation to contracted pelvis.

All will agree, then, that the only justification for the use of cesarean section lies in the fact that it presents a safer solution to the problem concerned than its competitors. There will be honest variations of judgment under certain circumstances in applying this. This is not important provided the decision is based on fact and not on fantasy. We can now acquire a great deal of knowledge about the obstetric pelvis. The baby's head can be accurately measured. There are accurate charts expressing the mortality rates of various degrees of prematurity. Placenta previa can be accurately diagnosed. More is known about the toxemias year by year. All of this can be accurately applied so that the range of differing judgment is narrow. One must take serious issue with indicating diagnoses which are not supported by adequate patient study. Such diagnoses as "failure of the head to engage," "suspected placenta previa," "prolonged labor," "occiput posterior" and "fetal asphyxia", mean nothing in terms of the problems concerned. They indicate all too clearly that insufficient information has been obtained. To multiply the dangers involved for the patient by ten to fifty times by the use of cesarean section under these circumstances represents gross negligence.

One other feature must be mentioned in this regard. It has been pointed out above that the main duty of the obstetrician lies in the realm of prophecy and that this must be based on accurate, complete and, if necessary, repeated study of the patient. A very large proportion of indicated cesarean sections are done because of abnormalities which can be accurately recognized and

assessed before labor begins. It has been repeatedly shown conclusively that the curve of cesarean section mortality rises rapidly with the increasing duration of labor. Reference will be made in detail to this below. All such abnormalities must be recognized in the prenatal period and elective section substituted for the much more dangerous section during labor. Again, adequate study of the patient is essential.

Consideration can now be given to some of the specific clinical problems involved. It is obviously impossible to exhaust the list.

It seems still to be necessary to urge the acceptance of local anesthesia for cesarean section. Fundamental studies³ have demonstrated the ease with which the intra-uterine fetus can be damaged as a result of disturbed blood gas tensions and concentrations. Such disturbances are frequently due to changes in the gas exchange in the mother which are brought about as a result of inhalation anesthetics. It can scarcely be said that a large number of fetal lives are lost by this mechanism in association with cesarean section since some additional factor such as prematurity, labor trauma or abnormality of the fetal vascular system is usually required to bring about fetal death. Such asphyxia deaths do occur as a result of inhalation anesthesia and these can be more or less completely avoided by the use of local anesthesia. It is impossible to say how many babies are lost in delivery by methods other than cesarean section who might have been saved had the additional factor of the anesthesia asphyxia been avoided.

Local anesthesia is at least as important to the mother. There have been three maternal mortalities in the state of Minnesota in the past nine months which are directly attributable to inhalation anesthesia. Not all of these accompanied cesarean section but all were in otherwise normal women. This is not a large number, it is true. It must be remembered, however, that the problem to be attacked is an expected maternal mortality for the general population of only approximately 0.2 per cent. Under these circumstances, three deaths loom large.

If inhalation anesthesia carries a danger to the otherwise normal patient, it can be readily accepted that certain types of disease processes will significantly increase that danger. Respiratory infections, cardiac and renal disease are examples of conditions in which general anesthetics are well avoided. Ether interferes with uterine contractions and has undoubtedly been a major factor in much postpartum hemorrhage. It is probable that the avoidance of inhalation anesthesia will obviate more or less completely the necessity for the removal of uteri damaged by premature sepa-

ration of the normally implanted placenta. Altogether, local anesthesia represents the safest anesthetic agent for both mother and fetus. The technics are not difficult to master. From the point of view of the patient's comfort, it has definite advantages. There would seem to be no reason for further delay in its acceptance for routine use.

A recent study² of 200 cesarean section deaths has shown that 92 died of sepsis. Of these, 68 were sectioned during labor and of these, at least 59 had been in labor for six hours or more. It is taking altogether too long to get acceptance of the fact that cesarean section late in labor is not a suitable method of getting out of dystocia difficulties which should have been recognized during the prenatal period. The insistence of Robert Harris as early as 1879 that the enormous cesarean section mortality of those times was related to the duration of labor, was an important contribution and its application had much to do with the eventual acceptance of Sänger's monumental work. The bacteriologic basis for this was established by Harris and Brown in 1927. Every informed writer on the subject has accepted the main conclusions. The fact remains, however, that about half of our cesarean section deaths are due to sepsis and that two-thirds of these have been done after more than six hours of labor.

A number of questions arise at once. Why are these being done late in labor? Is it possible to avoid this without the introduction of some other undesirable feature such as an increase in unnecessary sections or an undue sacrifice of fetal life? Is it possible to obtain accurate information during the prenatal period so that the indications for cesarean section will become evident and the elective operation with its less than one per cent mortality may be substituted for a later operation carrying ten to fifteen times this danger? Answers to these questions will unavoidably be flavored with a certain degree of personal prejudice. There is no need, however, to accept any situation less efficient than the ideal one, toward which it is reasonable to assume we are all straining. This must be stressed. There is an assumption when a patient employs a physician that she will receive efficient care and it is our duty to see that this is supplied.

In order to justify the conclusions which will be drawn, it is necessary to say that they have been clinically tested and appear to be sound. In the past four years 72 cesarean sections have been performed at the University of Minnesota Hospitals. Without exception, these have been elective procedures with only an occasional one done within an hour of the questionable onset of labor. There has been no so-called test of labor. One

fetus has been purposely destroyed rather than subject the mother to a section late in an infected labor. Two patients have died. One was destroyed by a postoperative retroperitoneal hemorrhage with subsequent thrombophlebitis and embolus. The other was sectioned in the interests of a premature but viable baby. She had a wide spread metastatic sarcoma from which she was moribund and eventually died. There is no sepsis death in the group. All cases where there might have been any question as to the adequacy of the indication were presented in detail at the time of handling to the department staff meeting, a highly qualified and critical group. Objection was not raised.

The indication for the largest single group of sections is pelvic and fetal dystocia. The survival curve for premature babies leaves no place for induction of labor because of dystocia before the thirty-sixth week of gestation. Indeed, from the point of view of the mother's safety, this procedure approaches the danger of elective cesarean section without the advantage of this latter in terms of baby survival. At the other end of the scale it is possible to estimate accurately enough the size of the baby so as to allow induction of labor at term in the presence of moderate pelvic contraction. If the fetus is of excessive size when first seen, the recognition of this fact is simple by palpation alone. Exact relationships between fetus and pelvis may be had by accurate x-ray measurements and the dystocia problem reduced to a mathematical expression. It would seem, then, that the normally presenting fetus presents no dystocia problem which cannot be adequately handled before labor begins.

Transverse presentations offer another problem. An occasional one of these occurs in the presence of a normal fetus and an apparently normal pelvis. This may recur in subsequent pregnancies and has been noted in three successive pregnancies. The cause for this is not known. Under any circumstance, this can readily be recognized by accurate palpation at term. A decision as to type of delivery may then readily precede the onset of labor. A large portion of transverse presentations are the result of labor in the presence of a contracted pelvis. This again, should not occur if adequate study of the pelvis and intra-uterine fetus has preceded labor. The neglected transverse presentation is not a candidate for cesarean section. There seems to be no insuperable problem here.

When the breech is the presenting part, some difficulties present themselves. The fetal mortality in the primiparous breech is high. There may be an occasional indication for elective cesarean section under these conditions although any-

thing resembling routine section is unjustified. On the other hand, the responsibility for being entirely certain of the adequacy of the pelvis is even greater and more difficult here. Meticulous care in the study of the pelvis is indicated since the passage of the head is the final test although the last event and occurs under circumstances where time is short and trauma disastrous. Contraction at the mid-pelvic level in particular must be recognized and accurately assessed if the patient is to be allowed to deliver from below with reasonable safety for the child. Again, it must be remembered that the fetal morbidities which arise from forceful delivery of the aftercoming head or extended arms are often of a peculiarly serious and permanent nature. Any suggestion of a mid-pelvic contraction in the presence of a persistent breech should undoubtedly be examined by means of accurate x-ray methods. Differences of opinion as to the handling of borderline problems here may well occur. If all of the information has been accurately obtained, there would seem to be no reason to object too seriously when they do.

There are a few other fetal indications for cesarean section but they are rare. The problem of fetal dystocia insofar as it affects cesarean section can be recognized before labor when fairly standard decisions can be made.

The vast majority of the dystocia problems are caused by abnormalities of the pelvis. Highly significant progress has been made in the knowledge of pelvic abnormalities in recent years and out of it has come a whole new concept of pelvic dystocia. Clinical examination has by and large been accurate in the control of the problems of the pelvic inlet and outlet. The mid-pelvis has defied objective and accurate approach until the advent of x-ray methods of study. These have led ever further afield. The accurate measurement of the fetal head and of the various diameters of the pelvis from inlet to outlet can now be carried out. Pelvic form has become interesting from the point of view of explaining the mechanism of a given engagement and descent. The projection of specific space and form in fore pelvis and hind pelvis into mid-pelvis and outlet can be accurately assessed and the compensations in one for disturbances in the other are important determinations. Transverse contractions at mid-pelvis may now be accurately recognized and assessed. New types of pelvic contractions which do not even have names are now being recognized before disaster is caused. What shall one call a recently observed pelvis which showed all clinical measurements to be within normal limits but which had a measurement between the ischial spines of 8.2 centimeters? A 2,600 gram baby had been forcibly

dragged past an almost exactly similar contraction with the production of severe damage by the spines to the fetal head. The recent case was delivered by elective cesarean section of a 3,710 gram child. It might be noted that the head of this child engaged late in pregnancy but was only at the pelvic inlet at term. X-ray study was done only because an astute physician noted that the spines seemed to encroach too much upon the pelvic canal.

It has long been possible to handle the antero-posterior contractions of the pelvic inlet accurately. The measurement of the diagonal conjugate diameter is an essential part of the prenatal examination. A fairly accurate determination of the biparietal diameter of the fetal head may be made from the estimated size of the fetus and this may be compared with the calculated obstetric conjugate diameter. The fetal head may be applied to the pelvic inlet for confirmation of the conclusions.

Fortunately, clinically significant transverse contractions of the pelvic inlet are rare. These are often associated with the anthropoid type of pelvis where a long anteroposterior compensates for the transverse contraction and allows engagement in direct anteroposterior. Other transverse contractions may be projected to mid-pelvis and outlet where they can be recognized.

The conclusion is that the pelvic inlet can be adequately assessed and related to the size of the head of the fetus concerned. Clinical experience has taught that when the significant contraction is in the anteroposterior diameter of the inlet and when this diameter in terms of the obstetric conjugate is larger than the biparietal diameter of the fetal head, engagement will occur. There is, of course, a no man's land between reasonably certain interference with engagement and reasonably certain engagement. Here, the wise physician will obtain as accurate information as possible and this is given by x-ray pelvimetry and cephalometry. This is no place for guessing, however profound that guessing may appear. The stakes are high and include unnecessary elective section, or dangerous section late in labor, and the life and health of the mother and child. Clinical experience has shown that accuracy can be attained. The no man's land is now narrow indeed.

The pelvic outlet, itself, can be adequately assessed by careful clinical means. Measurements between the tuberosities of the ischia, the anterior sagittal, posterior sagittal and anteroposterior diameters together with careful observation of the angle of the pubic arch and its form and sometimes, of the position of the anus in relation to the inter-ischial diameter will allow the experienced observer to make an adequate decision. What is only recently being recognized, however,

is that abnormalities of the outlet strongly suggest abnormalities of mid-pelvis which must be accurately discovered and assessed. All outlet abnormalities, irrespective of whether they are clinically significant insofar as the outlet itself is concerned or not, should be subjected to x-ray pelvimetry. Significant mid-pelvic disturbances will not infrequently be discovered by these means.

X-ray pelvimetry has turned up a very great deal of fascinating information regarding pelvic form and structure. It seems to have made its greatest clinical contribution in allowing accurate assessment of mid-pelvis. Gross disturbances here are not frequent but when they do occur and are not recognized, the results are little short of disastrous. Forceful delivery from below is likely to destroy or maim the infant. Cesarean section late in labor for this indication is an expensive price to pay for negligent prenatal examination.

This is not the place to discuss at length the problem of the mid-pelvis. The physician must learn to palpate carefully the sacrum, the side walls, the anterior wall, the sacro-sciatic notches and the ischial spines. Abnormalities of these must be recognized and subjected to accurate x-ray study since no other method is available for determining diameters, fore and hind pelvis form and compensations at this level.

X-ray pelvimetry and cephalometry are not fields for the amateur, either radiologist or obstetrician. They require a high degree of skill and precision which can only be obtained by experience. Dippel⁴ has described a satisfactory method, the application of which has proved its value and accuracy repeatedly.

Complete clinical examination, then, will adequately prove the great majority of pelvis and the fetuses concerned to be normal. All abnormalities must be found and accurately assessed. It is the author's considered opinion and practice to carry out x-ray studies on all pelvis which show any abnormality. When this is done, the problem of the fetal and pelvic dystocia disappears in the light of accurate data. Adequate decisions are made before delivery and cesarean section late in labor, on these indications at least, is obviated.

Since more accurate methods of studying the fetus and pelvis have become available and in view of the known danger of section late in labor, the so-called test of labor has been entirely avoided. The significance of the test of labor varied in different hands and even when carried to its ultimate end, showed only whether or not the head would pass the inlet. It appears that this can now be accurately assessed by other means. Excessive moulding of the fetal head is certainly dangerous and undesirable and it is doubtful if the head of

the Caucasian fetus at term can mold significantly without damage. It is true that in most cases a test of labor ended satisfactorily. This was due to two main factors. The test of labor was only applied to circumstances in which the clinician was satisfied that the given head would pass the given inlet. It was, then, a confirmation of prognosis rather than a test. In the second place, much the most common cause of contraction of the anteroposterior diameter of the inlet is due to rachitis. A very large proportion of these pelvis show increasing space as mid-pelvis and outlet are reached. The only problem was likely to be at the inlet. That this is not always so is evidenced by the clinician's fear of the generally contracted pelvis, the simple flat pelvis and the pelvis with outlet contraction associated with contraction of the inlet.

This raises another problem. Disturbances at mid-pelvis in the form of convergence of lateral bore or side-walls have their significance in relation to compensating factors. The same is true of disturbances of form and space in the fore pelvis or hind pelvis. If the inlet is large, convergence beneath this level may still leave ample space for passage of the fetal head. However, if the pelvis is small at the inlet, convergence at mid-pelvis and outlet will produce increasing difficulty as the head descends and this may be so serious as to make delivery of a living child a matter of serious question. Here again is justification for a very careful search at lower levels in the presence of an inlet contraction. A test of labor under these circumstances will only increase the dangers for both mother and child. It is the author's opinion that the use of the test of labor now means that essential data have not been obtained. It is a dangerous and useless form of clinical guessing and has no more place in clinical obstetrics.

It is not the object of this discussion to leave the impression that complete clinical and x-ray study will separate pelvic dystocia problems into two absolute groups, one for certain spontaneous delivery and another for section. There is a doubtful range at the inlet, at mid-pelvis and, to a lesser degree, at the outlet. The doubtful range is now very narrow and clinical experience is rapidly narrowing it still further. These patients are best delivered by elective cesarean section. Complete study of the fetus and pelvis will decrease the incidence of section rather than increase it. Disasters of mid-pelvic dystocia have been avoided. The test of labor and late section have disappeared. Clinical findings of contractions have not infrequently been proved to be mistaken. Accuracy has been substituted for clinical guessing.

What of the patient who is presented with an unrecognized pelvic or fetal dystocia late in labor and with an actual or potential intra-uterine infection? There is no method by which the harm may be undone. While low cervical section and, to a greater degree, radical section will decrease the danger somewhat, these are at best only designed to avoid a portion of the damage. Each case must be individualized for treatment. Again, the answer to the question depends upon the complete study of the patient and the choice of the least dangerous therapy. The object of this paper is to show that such situations can and must be prevented.

There is undoubtedly a place for cesarean section in the treatment of placenta previa, but here again, the necessity for accuracy must be stressed. Procedures from below will more rapidly stop blood loss and are safer for the mother than cesarean section. The presence of an intra-uterine infection is a complete contraindication to section and recent unsterile vaginal examination should give serious concern. Vaginal packing in the presence of placenta previa must cease. It does not control blood loss. It always produces at least potential infection and adds seriously to the mortality rate of the condition.

Cesarean section in placenta previa is done only in the interests of the child. How much one should add to the mother's danger to obtain a given chance for the fetus is to a degree a matter of individual judgment. There is no place for cesarean section when the fetus is already dead. The chance for the survival of a normal child at the end of the thirtieth week of pregnancy is only 30 per cent. Even at term, extensive blood loss and resultant hemorrhagic shock in the mother produce a very poor outlook for the child. Such circumstances are best handled from below irrespective of the type of the placenta previa. Attention should be focused on the control of further bleeding and on the treatment of the shock.

Lateral placenta previa may be treated from below with almost as good results for the fetus and with less danger to the mother than can be obtained by cesarean section. On the other hand, central placenta previa without infection or too severe blood loss and within six weeks of term will show an enormous saving in fetal life, out of proportion to the increase in maternal mortality, when treated by cesarean section. It is obvious, then, that accuracy of diagnosis is required.

There is, for practical purposes, no method by which placenta previa can be diagnosed other than direct intracervical palpation. Certainly, in the vast majority of instances, it is impossible by any

other means to be certain of the type. Cesarean section is only applicable to central and some of the partial placenta previas. The Ude cystogram shows only that a placenta is situated on the anterior wall and does not show the type. It has no value when it is negative. Soft tissue roentgenography is most useful in a negative sense. The demonstration of the presence of a placenta on the fundus rules out placenta previa. It, again, will show the presence of a placenta previa but not its type. At the University of Minnesota, it is used routinely in uterine bleeding of the last trimester. If this does not disprove placenta previa, vaginal examination under strict so-called sterile delivery room technic is carried out and an exact diagnosis made. It has been objected that this increases the danger of infection. This is probably true but the danger is so small that in our hands it has not been demonstrable. This has saved the exposure of considerable numbers of patients to cesarean section. What is more important, it has frequently allowed avoidance of the heavy fetal mortality incident upon premature interruption of the pregnancy when the bleeding has been directly demonstrated to be due to active cervical erosion, cervical polyps or low implantation of the placenta which requires no therapy in contradistinction to placenta previa. This sterile vaginal examination must be carried out in a well equipped hospital with strict attention to technical details.

The problem of the use of cesarean section in premature separation of the normally implanted placenta will be discussed elsewhere in the course of this meeting. It will be pointed out that cesarean section is not automatically indicated by premature separation if, indeed, it ever is indicated. The fetal salvage is almost negligible under any circumstances. The mild case will usually solve itself by delivery from below. Shock represents the major problem in the severe case and shock is treated by blood transfusion and not by the addition of the surgical shock of cesarean section.

This leads to the last point. A detailed study of every maternal mortality in the state of Minnesota has been carried out for the past nine months. It has become clear that the greatest improvement which can be made will depend upon the speedy recognition and treatment of both hemorrhagic and surgical shock. Blood banks or at least quickly available grouped donors and serums or plasma must be set up in every community. The physician must be acutely aware of the speed with which shock can produce irreversible changes. The significance of this in the various problems of cesarean section is obvious.

The conclusion seems justified that improvement

in cesarean section results for both mother and child is not only possible but urgently necessary. Improvement hinges to a very large degree upon timely accurate study of the patient. This will allow the avoidance of unnecessary cesarean sections and the almost complete substitution of elective section for the dangerous section late in labor. Surgery has not proved itself to be an adequate substitute for the painstaking arts of patient study and obstetric skill.

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RECOGNITION OF THE NORMAL HEART*

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Recognition of the normal heart may seem a strange subject. Someone may ask whether the existence of a normal heart is not always apparent. The answer is an emphatic no. Relatively few discussions concerning recognition of the normal heart are recorded in medical literature. No doubt exists that it is frequently difficult to distinguish the normal heart from one that has been slightly impaired by disease and to distinguish clearly this slightly injured heart from the structurally normal one which has been disturbed by the provocative influences of neurosis.

The physician's uncompromising verdict to his patient that the heart is not impaired by disease, a verdict obtained only by means of careful examination, is a most satisfying experience to all concerned. To aid the physician who is willing to make this diagnosis under justifiable circumstances is my particular wish in this communication. Many instances occur in which the physician appears reluctant to express the opinion that the heart is normal. The explanation of this attitude is found in several sets of circumstances. The physician may lack confidence in the accuracy of his observations or their interpretation. In spite of the absence of incriminating symptoms and signs, his reluctance to tender a positive opinion may be motivated by the fear that serious disease may be present but not detected. In the absence of evidence of disease, the physician is hesitant to commit himself to the verdict that the heart is normal

on the presumption that, if the heart is normal at the time of diagnosis, disease may supervene later and he may thus be censured for not having recognized the abnormality at an earlier time.

Indecision of this character is lamentable, because it comprises that form of practice which contributes so generously to that ever existing horde of patients who have cardiac neuroses. These patients become so convinced that they have a disease, which is actually non-existent, that their very existence becomes a horrible eternity of fear and uncertainty. Perfection in diagnosis is not one of the attributes of mortal man. The physician must accept this premise, unhappy as it may be, and accept the hazard of error willingly when it is made in a conscientious attempt to help, rather than to try to avoid such error by always leaving an exit for himself at the expense of human anguish. Little doubt exists that more errors in diagnosis occur as the result of such evasive methods than as the method of conscientious conviction.

The physician is not justified in using vague or inappropriate terms in discussing the results of examination with the patient. To advise the patient that he has a "weak heart" or that the heart has been "strained" is uninformative and inaccurate, and may lead to an interpretation on the part of the patient which is completely contrary to the physician's intentions.

FACTORS FOR CONSIDERATION

Data from the History. A critical inquiry concerning etiologic diseases and intelligent interpretation of the results of this inquiry are of great importance in every case. Of the infectious diseases, rheumatic fever, chorea and syphilis are considered of primary causative significance today. Although other infections may injure the heart, they participate in this rôle so infrequently and so uncertainly that they merit little emphasis. An undeniable history of the previous occurrence of rheumatic fever or chorea places the burden of proof on the physician when he pronounces the heart normal under these circumstances. It is not common for the heart to escape injury if rheumatic fever has occurred. In regard to syphilis, a remarkable diminution in the cardiovascular participation has been effected through earlier recognition of the infection and earlier institution of more adequate treatment. Although syphilis of the cardiovascular system must continue to occupy clinical suspicion, it must be recalled that it usually indicates a late and advanced stage of the disease.

Clues in regard to the possible existence of a congenital cardiac defect are frequently disclosed by careful recording of the patient's history, such as the existence of cyanosis at birth, a frail childhood, the existence of other obvious congenital

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defects and the information that a cardiac murmur has persisted since early life. The presence of goiter would obviously demand the prompt consideration of hyperthyroidism.

In the case of both coronary and hypertensive heart disease, the personal history may be rather uninformative, but other members of the family and ancestors may have had one or both of these cardiac lesions. In these cases, the physician is confronted with the interpretation of both subjective and objective evidence present at the time of examination.

Symptoms. After the patient has been examined carefully, an accurate history recorded, a thorough physical examination conducted and pertinent laboratory adjuncts have been correlated, the various subjective and objective bits of evidence which frequently are the basis for the false indictment of the normal heart must be considered. One of the most prominent symptoms of the diseased heart is dyspnea, yet too often the physician accepts the complaint of shortness of breath as genuine when in reality it is counterfeit. It is necessary to inquire carefully concerning the character of the shortness of breath and not to accept the statement as fact. Patients differ greatly in their interpretation of symptoms. For example, virtually all patients who present themselves for examinations with the well-known syndrome of "functional dyspnea" do so complaining of shortness of breath. However, diligent inquiry readily brings forth the typical description of this functional disturbance and the true nature of the complaint is revealed quickly. Failure to find evidences of cardiac disease enables the physician to render a positive verdict and usually to aid the patient in a prompt and complete recovery.

Consciousness of the heart comprising either tachycardia or arrhythmia, or both, is a common symptom and frequently leads to the erroneous diagnosis of cardiac disease. When organic causes are eliminated by careful examination and when significant arrhythmias have not been demonstrated, the physician must emphatically deny the existence of disease. For instance, the presence of premature contractions (extrasystoles) must never be the sole evidence for the diagnosis of cardiac disease; they are observed far more commonly in the irritable heart which is organically unimpaired. Premature contractions, almost without exception, are never the presenting symptom of cardiac disease.

Thoracic pain frequently leads to the erroneous diagnosis of cardiac disease. Numerous conditions are commonly confused with the anginal syndrome of coronary disease. It is insufficient to accept

the complaint of thoracic pain occurring in the general region of the heart as constituting positive evidence of coronary disease, although the diagnosis of the anginal syndrome is purely subjective in approximately one-third of the cases. This fact alone is a challenge to the physician and necessitates the utilization of every bit of his diagnostic acumen to obtain a detailed and accurate account of the symptoms, to appraise them intelligently and judiciously and, when possible, to be a witness at the time that the patient experiences the discomfort. The simple expedient of personally observing the effect of the nitrites during the occurrence of pain frequently reveals extremely important information. It must be re-emphasized without elaboration that many conditions exist which may falsely indict the heart under these circumstances.

Size of the Heart. Determination of the size of the heart is many times the crucial point in distinguishing the normal from the diseased heart. With few exceptions it is possible to postulate that an enlarged heart is a diseased heart; therefore, the information that the heart is not enlarged is invaluable. Unless the diagnostician cultivates the art of percussion, he soon loses his precision which, when highly developed and under average conditions, often permits him to delineate the cardiac borders with a limit of error not exceeding 1.0 to 1.5 centimeters.

Roentgenologic examination is an extremely valuable adjunct in accurately determining the size of the cardiac silhouette and any abnormalities in its contour. From the standpoint of accuracy of size, the teleroentgenogram gives the most satisfactory and constant results. Several basic factors must be taken into consideration in interpretation of the cardiac silhouette. The total maximal transverse diameter of the shadow of the heart must be correlated with the internal transverse diameter of the bony thorax. In general, it can be stated that the maximal transverse diameter of the silhouette of a heart of normal size is somewhat less than 50 per cent of the transverse internal diameter of the thorax. Exceptions to this rule will be cited. The habitus of the patient must be appraised judiciously, for failure to recognize this factor leads to many erroneous opinions in regard to the size of the heart. As a rule, the massively built, stocky, short-necked person has a relatively high diaphragm, which reduces the vertical diameter of the thorax and causes the heart to assume a more transverse position. On superficial inspection, this may give the appearance of cardiac enlargement. Similar considerations apply to the obese patient. It must be remembered that the hearts of these

patients are actually larger than those of thin persons or persons of normal weight. Thus, again, caution must be used in interpreting cardiac silhouettes as representing pathologic cardiac enlargement.

In contradistinction to the stocky or obese person it becomes important to accord attention to the status of the tall, thin, asthenic person. The diaphragm usually occupies a relatively low level, the vertical diameter of the thorax is increased, the heart is centrally placed and, at times, appears to be suspended from its base. This results in a long, narrow and, at times, an almost tube-like silhouette which, even under pathologic conditions, may represent only 40 per cent or less of the transverse internal diameter of the thorax. Careful scrutiny of the borders of the silhouette may reveal abnormal prominences indicative of enlargement of certain chambers. Space does not permit a comprehensive comment on abnormalities in the contour of the cardiac silhouette, but it is sufficient to state that this method of study is of great diagnostic value.

Cardiac Murmur. Probably no single objective finding leads to more false diagnoses of cardiac disease than the presence of a murmur. In this communication I have obviously excluded the pre-systolic and diastolic murmurs. In many instances in which a soft, blowing systolic murmur is heard at the apex of the heart, this is the sole evidence suggestive of a valvular defect. There is no cardiac enlargement, the roentgenographic silhouette of the heart is normal and no alterations in the second heart tones occur. The murmur is not transmitted widely and careful auscultation reveals that the heart tones are maintained as the intensity of the murmur fades out when the stethoscope is placed beyond the region of maximal intensity. Likewise, the systolic murmur audible over the first and second left intercostal spaces (the pulmonic area or area of auscultatory romance) frequently is the sole basis for the incrimination of a healthy heart. Venous or arterial bruits in the great vessels of the neck or thyroid arteries are likely to be heard over the upper anterior portion of the thorax; it therefore becomes important to determine the region of origin of a murmur as well as the path of its propagation. Rather loud, musical murmurs which appear to arise just under the stethoscope, possessed of a to-and-fro character, often are mistaken for a murmur arising from cardiac disease and frequently, examination of the patient when he is in different positions will reveal modifications in the murmur or its complete disappearance. Likewise, observation of the influ-

ence of the respiratory excursions on the murmur will result in its complete disappearance during expiration and its rather intense augmentation during inspiration. Such observations in the absence of other evidences of cardiac disease clearly establish the innoxious significance of the murmur and stamp it as a result of contact of a portion of the lung with the pericardium, a contact which at times occurs under normal conditions as the lung expands in the course of the respiratory cycle.

Electrocardiography. The electrocardiograph has proved a helpful adjunct in completing the data necessary to arrive at the opinion that the heart is healthy. The high incidence of graphic alterations in the presence of heart disease places additional value on the electrocardiogram when the electrocardiographic pattern is normal, but this fact must not mislead the clinician. There are many instances in which the electrocardiogram is unaltered and yet serious cardiac disease is present. It is in these instances particularly that both the advantages and limitations of a method must be appreciated clearly and the changing order of importance of the method or any method from case to case must be understood. The physician must never attempt to make a diagnosis of cardiac disease from the electrocardiogram alone, but instead must intelligently correlate the results with all other clinical findings. This is one of the sets of circumstances in which both the science and the art of medicine must be amply blended. Numerous instances occur in which a diagnosis of serious heart disease is made after some electrocardiographic finding was the only parcel of evidence. This practice is to be violently condemned.

Other instances of false evidence could be considered, but I believe that the point in question has been stressed.

SUMMARY AND CONCLUSIONS

In concluding the consideration of the means of arriving at a conviction that the heart is normal, it is apparent that these means consist of the skillful use of the methods which comprise the science, and the knowledge which comprises the art, of diagnosis. By eliminative deduction, bits of evidence, both incriminative and exonerative, and by judiciously weighing, accepting or discarding, as the case may be, the ultimate conclusion is reached by logical and scientific means. The physician must reach the conclusion with certainty and conviction, so that he is able to render his verdict in absolute terms and remove the horrors of doubt from the patient's mind. No diagnosis can be more beneficent than the diagnosis that the heart is normal.

NASAL OBSTRUCTION*

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I have chosen this subject because it seems to give rather a wide range in which to say what we wish about nasal disease. Very frequently the entrance complaint in any nasal difficulty is obstruction or difficulty in breathing, and I have felt that we might develop a useful paper from a symptom complex.

All progress in medicine is made by taking stock of ourselves from time to time, bearing in mind what we have learned by investigation and experience in the past and checking up to see if we are keeping step in our actual practice with our increased knowledge of the physiology and pathology.

Our record in rhinology over a long period of years has not been good. At least it is so construed by the public and quite a large part of the profession. I believe this can best be explained by the fact that we failed to differentiate between those diseases that were produced by bacterial invasion and those produced on an allergic basis. Our greatest cause for failure was the fact that we markedly interfered with the physiology of the nose without bringing about a condition which led to resolution. We did recognize grossly the different pathologic pictures, but we stopped there. Although the general protective measures against infection of the mucous membrane in other parts of the body had been studied extensively, as far as the nose was concerned, they had been rather disregarded. Our present concept of the physiology of the nose is based primarily on studies carried out in the past ten to twelve years. Hilding¹ in 1932 wrote on the physiology of drainage of nasal mucus, stressing the fact that the flow of mucus is toward the nasopharynx and that the greater ciliary activity is in the upper and posterior two-thirds of the nose. He also emphasizes the importance of the mucous sheet as a protection against infection. Lucas² and Douglas³ reach about the same conclusions.

Lierle and Moore⁴ in 1934 reported the effect of certain drugs on ciliary activity of the nose. They concluded that ephedrine three per cent and weak cocaine solutions did not slow down ciliary activity. Proetz⁵ in 1934 recorded the effects of certain drugs upon living nasal ciliated epithelium. Fenton⁶ in 1932 reported on mucosal immunity in the nose and accessory sinuses. Our own guest, Dr. Hansel,⁷ has contributed as much as any one individual toward a rational approach to the whole field of paranasal sinus disease and

allergy, and great credit is due him. The chief point in all these studies is that the nasal mucous membrane intact is our first true and chief source of defense against infection.

From the beginning of time when records were kept, about the only treatment in nasal obstruction was the removal of whatever tissue was necessary to give adequate space. This usually meant the removal of parts of the inferior, and sometimes the middle, turbinates, or the attempt to remove with a saw spurs or parts of a deformed nasal septum, taking away with this large parts of nasal mucous membrane. We have been aware of the fallacy of this procedure for many years. From this early radical attitude we switched to that of either doing nothing or removing spurs or doing submucous resections, which in the majority of cases failed to accomplish fully what we set out to do. Only comparatively recently has the importance of vasomotor rhinitis or allergy taken its true place.

Although allergy and vasomotor rhinitis may cover the majority of cases complaining of nasal obstruction, we have to consider the entire rôle of nasal disease with this entrance complaint. A few years ago a patient came to me complaining of nasal obstruction, general weakness and inability to open her eyes well. She proved to be a case of marked hypothyroidism and the nasal obstruction disappeared on the adequate administration of thyroid extract. This past year I saw a child four years of age with pus and granulations filling one side of the nose. The obstruction was complete. Suspecting a foreign body, a history was obtained from the mother that the child played with art gum at times and might have placed some in the nose. This had happened two years ago. Large pieces of dark gummy material were removed and a complete recovery followed. Last summer a patient came stating that she felt she needed sinus surgery. The left side of her nose was completely blocked. The septum was thick and soft and she had a scar over her left frontal sinus. She stated that a tumor had been removed and was slow in healing. Her blood Wassermann test was four plus. The obstruction disappeared on antiluetic treatment. A young man was seen six months ago complaining of marked left-sided nasal obstruction. A large bluish tumor of the nasopharynx blocked his breathing on that side. I only mention these cases to emphasize that nasal obstruction may be caused by a great variety of diseases.

The following brief outline should cover the common causes of nasal obstruction:

1. Anatomic. Collapsing ala nasi and the congenital or acquired narrow nose.

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2. Intranasal bony deformity, such as dislocated anterior cartilages, deflected septa and spurs.
3. General infections, such as syphilis, tuberculosis and other infectious granulomas with obstructive pathology in the nose.
4. Foreign bodies, including rhinolith.
5. New growths.
6. Sinus infection, with polyps and edema of the mucous membrane.
7. Allergy and vasomotor rhinitis.
8. Growths, benign and malignant in the nasopharynx.
9. Crusting from marked trophic disturbance of the nose.
10. Acute infections—nasal diphtheria.

DIAGNOSIS

In working out a diagnosis, the importance of a good history cannot be stressed too much. Too frequently in the busy routine of office practice we pick up a nasal speculum, inspect the nose and begin to form in our own mind a quick diagnosis. We may see a septum pushed over to the right only to find when we begin to take a history that the patient complains of left-sided obstruction. Particularly in vasomotor rhinitis, we may have nothing but a history on which to make a diagnosis. We want to know whether an obstruction is constant, whether it shifts from side to side, if it is accompanied with sneezing, watery nasal discharge, etc. Whatever the position of the septum, if the patient states that his obstruction shifts from side to side, that at times his breathing is perfectly free, a resection no matter how carefully done, will end in an unsatisfactory result.

The history of headache and head pain as a symptom of nasal obstruction, or of pressure of the septum on a turbinate, or sinus infection, has been greatly exaggerated, particularly in the layman's mind. We are all aware of the great number of people who have made a diagnosis of sinus disease on themselves who usually have one, and only one, complaint and that is headache. We all know that headache is rare in sinus infection and nasal obstruction. The exception is an acute sinusitis or an acute exacerbation of a chronic infection. Many migraine sufferers have a few nasal packs with each periodic attack. In discussing the symptoms of chronic sinusitis, Williams and Mousel⁸ state that "pain is the exception rather than the rule in cases of chronic sinusitis, and unless there is an exacerbation of chronic sinusitis, the proferring of pain or headache as a chief complaint should weigh against the probability of the presence of chronic sinus disease. The most prominent local sign of chronic sinusitis is a persistent nasal and postnasal discharge."

The most pertinent point in a history of chronic sinus infection is that of nasal discharge and not of obstruction, while the history of practically all vasomotor rhinitis and allergy is obstruction. In working out an allergy case, a detailed history often gives us more information than skin testing.

Another important part in the history is determining if the difficulty in breathing is on inspiration or on expiration. Lillie and Simonton, in a rather recent article,⁹ covered this subject completely, and I will quote directly: "A common, often unthought-of cause for the subjective sensation of nasal obstruction has been described as 'alar collapse.' It is more frequently encountered as a cause of nasal obstruction than is generally supposed. Collapse of the alae nasi is a frequent cause of partial nasal obstruction, especially in persons having narrow noses. It is produced by overactivity of either the constrictor or dilator muscles of the nose and is influenced by the negative pressure of inspiration. The condition is often overlooked because of failure to look for it. Relief from symptoms may be obtained by a change in breathing habits, by wearing a device to hold the alae open, or a well directed plastic operation."

Unilateral obstruction I believe is never due to allergy. Foul nasal discharge is an important point in the history, almost diagnostic of an infection of one or more sinuses. The absence of this history should not make us rule out such a diagnosis. Many patients have had their foul discharge so long that they must be oblivious of its presence. Obstruction from allergy or vasomotor rhinitis accounts for the majority of the patients seeking relief from nasal obstruction. A good history should make the diagnosis or at least make us strongly suspect it.

It is wasting time to go over the steps of a routine examination in talking to this section. I will only mention some of the things that we all know but may overlook. The general shape of the face and nose should be noted. The narrow nose and the high palatal arch may give us a lead. We should have the patient breathe so that we may study his breathing habits. It is always a good idea to have the patient come for examination at a time when he thinks his breathing is obstructed. Polyps in the anterior nares and middle meatus are not missed. The large solitary polyp in the nasopharynx that may only cause obstruction on expiration can be easily overlooked. The hypertrophied or swollen posterior end of an inferior turbinate is a common cause for difficulty in breathing and one that can be easily overlooked. The routine use of the nasopharyngoscope will aid greatly in making a diagnosis of such a condition.

Routine Wassermann tests may save us many embarrassing moments and be of great value to the patient. Biopsy of suspicious lesions should be done. The amount and character of nasal discharge should be studied grossly and microscopically. Purulent discharge particularly may be present only in the morning. I do many more antrum punctures for diagnostic purposes than for treatment. If a good view of the nasopharynx cannot be obtained with a nasopharyngoscope or a mirror, we can at least carry out a digital examination. This is particularly important in children.

X-rays are an essential part of a complete examination. We are not always able to get them in private practice. The roentgenologist can tell us of the presence of fluid, thickened membrane, polyps in a sinus and osteitis. We should remember that the x-ray is only one of the laboratory aids in making a diagnosis and becomes of value only when considered along with the history and other findings.

TREATMENT

In discussing treatment a word should first be said about prophylaxis. The infant or child who has marked obstruction and a nasopharynx blocked with lymphoid tissue should be given relief as early as possible. The complete reduction of fractures with emphasis on the correction of the intranasal deformity may prevent the development of a deflected septum and particularly the dislocated anterior triangular cartilage. The dislocated anterior triangular cartilage often produces a real problem where the obstruction is marked. Many of these can be corrected by a well directed plastic operation without the loss of cartilage, thus preserving the support so badly needed in childhood.

The acute nasal obstruction accompanying the common head cold, or acute sinusitis, calls for as little local treatment as possible. Two or three per cent ephedrine in normal saline will often afford relief and do the least damage to the nasal mucous membrane. In acute head infections we try to emphasize the marked benefit of bed rest, some of the sulfonamide drugs in severe cases, steam inhalations or high humidity in the room, and ephedrine locally and that only when obstruction is present. Every chronic sinus infection is the result of an unresolved acute infection. The passing along of a case of nasal obstruction, whether acute or chronic, by simply prescribing nose drops is to be condemned.

If we are convinced we are dealing with a frank nasal allergy, that patient should be studied completely from that standpoint. Often the diagnosis is not easy and we usually have to evaluate the

part played by a questionable allergy, a certain amount of septal deformity and sinus infection. I would first emphasize the necessity of not being in a hurry to outline a set treatment without a period of observation. Time frequently changes our whole conception of a case and I believe this is particularly true in rhinology. An infection which at first may seem to need surgical interference often progresses to spontaneous cure. A few washings by puncture through the inferior meatus may completely change the picture of an antrum infection. The septum which seems to occlude badly one side of the nose may prove on observation to be causing no trouble. On the other hand, a high deflection may interfere with ventilation and drainage of a frontal or maxillary sinus, and the patient may still have adequate breathing space.

Even with our vastly increased knowledge of allergy and its management, many allergic patients return to the rhinologist for the relief of their obstruction. Many times the skin testing results are unsatisfactory. Either the patient is sensitive to so many factors that desensitization cannot be carried out, or the report comes back that the tests are practically negative. I believe it should be said, in all fairness, that the great majority of failures come about because of the poor cooperation of the patient. Many of our patients are unable to obtain the advice of an expert allergist and we should not take the position that we can do nothing for them. We can at least take the time to explain what is known about allergy. The first requirement of a good allergist is to be a good detective. Many patients will work out their own problem once they are given some basis on which to proceed. In our office we have printed lists of the common offending agents. We frequently have patients keep a food diary. Calcium lactate and dilute nitrohydrochloric acid given internally often give great relief, but I cannot tell you why.

It is in the management of the allergic or vasomotor group that I have been particularly interested. In many patients it is almost mandatory that some relief be given to their nasal obstruction even though they have been through the hands of the allergist and the rhinologist acting as an amateur allergist. Fishof¹⁰ mentioned the use of sodium morrhuate as a sclerosing solution injected beneath the mucosa of the inferior turbinates as a means of giving enough scarring to decrease the size of the turbinates and give better breathing space. Many other methods have been mentioned in the past, such as removal of parts of the turbinates, cauterization with various agents and zinc ionization. Fishof believed that this solution was preferable because it did not destroy the physiologic functions of the nasal mucosa and because

the contraction of the turbinates could be regulated by the amount of fluid injected.

Thacker¹¹ reports on his work along the same line, using sodium psylliate as the sclerosing solution. He gives the following indications for treatment with sodium psylliate:

1. Chronic nasal obstruction from engorged turbinates which have failed to respond to the usual therapeutic measure after one month of trial.

2. Postnasal dripping, chronic pharyngitis, headache and neuralgic pains in the head and neck in which an intumescence of the turbinates exists and is causing pressure on the lateral wall of the nose or the septum.

3. Intermittent nasal obstruction of long duration, especially when this is associated with temperature and humidity changes.

4. Long standing cases of chronic sinusitis with associated turgescence of the turbinates.

5. The turbinates must shrink well with astringents.

Although not subscribing to all of the above indications, I have used sodium psylliate in a good many patients in the past two years and the results have been gratifying. Its use has been confined to those patients who have had an allergic or vasomotor obstruction in which we felt that a submucous resection would be of little or no value and that their whole obstruction was produced by engorged mucous membrane. It has many advantages. The procedure is simple. We can introduce the solution in exactly that part of the turbinate which seems to be producing the obstruction. It is an office procedure but the patient may complain of some burning about his face and some headache. From a clinical standpoint, I have seen no drying or gross evidence of disturbed physiology. Severe reactions and sloughing can be prevented by using only a few drops of the solution at a time. It is surprising to see the amount of shrinking that even a small amount of solution will give, and we must remember that the difference between obstruction and free breathing may be only a few millimeters of space. It has been particularly useful on those people with a hypertrophied or edematous posterior end of an inferior turbinate and for those patients who only complain of obstruction on lying down at night.

In this discussion, which is distinctly on the conservative side, I hope I have not given the impression that I feel all nasal surgery is unnecessary. On the contrary, in our very conservative swing in the past twenty years, I wonder if we are not failing to carry out many procedures which should be done. No patient is more grateful than the one who has had a good submucous resection when he really needed it. Even in the allergic

nose, the correction of a deformed septum may be a very necessary part of the treatment. Another very grateful patient is the one with a foul antrum who has had repeated lavages, nasal packs, vaccines, etc., after some one does an antro-meatal resection that affords good ventilation and drainage. The patient with a chronic frontal sinus who has acute exacerbations is much happier and safer when cured. The treatment of this individual should be adequate. If improved nasal ventilation and clearing up of the secondary antrum and anterior ethmoids surgically does not bring about a cure, he should have the benefit of a carefully done external frontal resection. Just as we endeavor to carry out our medical treatment with as little disturbance of nasal physiology as possible, the same principle applies to nasal surgery.

I believe that our results in rhinology as practiced today are as satisfactory as in any field of medicine. In this paper I have tried to emphasize some of the reasons for our failure in the past and to emphasize the necessity of good histories, complete examinations, cooperation with the internist, and particularly the allergist, as the best means of rendering good medical service in the practice of rhinology.

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Discussion

Dr. Martin J. Ryan, Sioux City: Dr. Foster's paper on nasal obstruction is a clear and concise treatise of the subject. In it he has set forth an inclusive outline of the common causes of nasal obstruction, their differential diagnoses and methods of correction. At the risk of sounding extravagant in my appraisal of this paper, I will say that it can well be read and reread, with a great deal of benefit. In my opinion it contains the essence of good rhinology.

A summation of this paper brings forth the conclusion that the practice of rhinology requires consummate judgment, equal to that necessary in any

other branch of medicine. The author has stressed this by emphasizing the importance of careful study, including detailed history, nasopharyngeal investigation, frequent diagnostic antral punctures, x-ray, bacteriologic and laboratory procedures; a period of observation before arriving at a definite conclusion as to treatment and then the institution of effective measures once the conclusion has been reached.

The speaker points out that the most pertinent point in the history of chronic sinus infection is that of nasal discharge and not of obstruction, while the history of practically all vasomotor rhinitis and allergy is obstruction. In the latter instance the intermittent character of the obstruction and its shifting from one nares to the other is stressed. These are valuable differentiations and bear repetition.

In this discussion Dr. Foster states that allergy and vasomotor rhinitis account for the majority of patients complaining of nasal obstruction. This, I am sure, is the generally held concept and one which rhinologists must bear in mind in patients with this complaint. A great deal can be done for these patients in conjunction with the allergist and internist. It has been my practice to provide these patients with elimination diet lists with indifferent success. These, in conjunction with skin tests, desensitization measures and medicines used in allergy will relieve, to some degree, many of these patients. Certainly there is no more grateful patient than one with a severe nasal obstruction who obtains relief.

Possibly the keynote of the paper is the stressing of good judgment in the application of corrective measures, either medical or surgical. He definitely condemns radical procedures which result in disturbance of normal nasal physiologic processes, but on the other hand he warns against failure to carry out procedures which should be done. I am sure that there can be nothing but agreement to these statements.

As rhinologists we are frequently accused of limiting our interest to what we see in the nose before us at the moment. More and more, however, we recognize the necessity of maintaining a broader perspective, encompassing the patient's constitutional make-up, the general physical and mental attributes and the environmental irritating factors to which he is subjected.

Dr. Foster has enumerated the conditions producing nasal obstruction. Predisposing factors to nasal obstructions and repeated infections should be emphasized and prevention practiced. From an anatomic point of view, orthodontia with the correction of oral and palatal defects will prevent facial asymmetry and the resultant crowding and narrowing of the nasal spaces. Dietary history should be studied not only from an allergic standpoint, but also from a nutritional one. I would like to ask Dr. Foster if he thinks that the high carbohydrate diets, diets deficient in vitamins, particularly the Vitamin B complex and iodine, predispose to an unhealthy nasal mucosa.

Environmental factors, particularly deficient humidity, increased solids in the air, over-heating, over-crowded conditions, deficient ultra-violet concentrations, the presence of which supposedly has an attenuating effect on bacteria, should be given consideration when counseling with the patient.

In active treatment of vasomotor rhinitis the use of histaminase as reported by Prickman may be of some benefit. Conservative measures in the treatment of acute infections were stressed. The value of postural drainage should not be forgotten and it is my belief that roentgen therapy has its place in certain acute processes. Sulfonamide drug therapy is a two-edged sword; we must not lose sight of its possible deleterious side effects.

Chronic nasal obstruction not only produces physical changes, but not infrequently brings about personality changes. It is not only the duty of the rhinologist to render what physical aid possible, he must also educate the patient to the nature of the disability so that the patient may accept it without developing a neurosis or hypochondriasis. These unfortunate individuals in distress and sometimes panic must be protected again ill-advised surgery and the various nostrum which annually take a disabling and economic toll.

VENOUS PRESSURE IN CHILDREN*

LEWIS H. JACQUES, Iowa City

The measurement of venous pressure is a simple clinical procedure, useful for diagnostic and prognostic purposes upon patients with suspected or proved cardiac impairment. It is well known that cardiac decompensation is accompanied by an increase in the peripheral venous blood pressure. If the venous tension were measured accurately, small changes would become significant, and the clinician might find such changes useful in his interpretation of the cardiac status. Upon the other hand, if the venous pressure measurements are widely variable because of technical inaccuracies, he will pursue a different course in his search for evidence of impending decompensation and will deprive himself of a useful clinical tool. The usefulness of the measurement of venous pressure is, at present, impaired by the lack of a standard method and knowledge of the normal range in children. This study was conducted in an endeavor to standardize the technic of measuring venous pressure, and to establish normal standards for venous pressure in children.

It should be understood that venous pressure, as measured directly in a peripheral vein, is "effective pressure." Many factors play a part in the production of this "effective pressure", such as cardiac function, intrathoracic pressure changes, exercise and hydrostatic effects. These factors

*Thesis which was awarded the 1942 Baldridge-Beye Memorial Prize. The author was a senior medical student at the University of Iowa, College of Medicine.

have been adequately treated by Best and Taylor.¹ An effort has been made to control, as much as possible, these normal physiologic variants.

A comprehensive and illuminating review of venous pressure measurements in adults has been published by Lyons, Kennedy and Burwell.² These workers conducted an extensive study of the problem, with special emphasis upon standardization of technic. The method evolved is a modification of the Moritz and von Tabora method. The Moritz and von Tabora apparatus is used; manometer tubing of two millimeter bore and an 18 gauge needle are employed. The subject is placed upon a table in the supine position and the arm is comfortably supported in a position of extension, supination and about 35 degrees of abduction. Adequate time is allowed for the subject to become relaxed and quiet after the needle has been inserted into the vein. The zero point of the manometer is placed 100 millimeters anterior to the skin of the back, i. e., ten centimeters above the table upon which the subject lies. This technic is simple and readily reduplicated in successive measurements.

Lyons points out the advisability of using a readily reproducible zero point, such as a standard height above the supporting table. It was observed that "the greater the thoracic diameter the lower the apparent venous pressure tends to be" and that "the venous pressure in these persons with large chests is low, not because of an actual change in the venous pressure, but because the shape of the thorax has resulted in setting of the zero point in a falsely high position". In confirmation of this finding, we observed that a reading of 100 millimeters, obtained with the zero point set ten centimeters anterior to the flat surface of the table on which the child rests, could be lowered to sixty millimeters by elevating the zero point four centimeters, i. e., to a position fourteen centimeters anterior to the back. This observation was so easily demonstrable that its implications forced themselves upon us; unless the patient is resting upon a perfectly flat surface and the zero point of the manometer is fixed with reference to that surface, the possibilities of error are great. For this reason, measurements taken with the patient in bed or sitting up are inaccurate, and will vary markedly from day to day. An accurately determined, constant zero point must be employed upon successive days in order to obtain consistent results. Clinicians should accept a standard zero point for making venous pressure measurements. The point suggested by Lyons, et al., is a convenient one and is readily reproducible.

Because of the simplicity and the well-defined manner in which the method was developed, it was

decided to use the technic as suggested by Lyons. Venous pressure measurements were made upon 36 children between the ages of seven and fifteen years. Each child was studied upon two different days. Repeated readings were made and an average of these was taken as the normal pressure for that child. The cardiovascular systems of the children were normal as determined by clinical means and their general physical condition was good. Measurements were made of the antero-posterior diameter of the chest of each child at the level of the second intercostal space to the right of the sternum. Arterial blood pressure measurements were used to evaluate the emotional status of the child during the readings. Height, weight, sex, age and the thickness of the arm, as measured from the antecubital fossa to the olecranon process, with the arm extended, were also recorded.

The results of these measurements are presented in Table I. The mean value observed was 97.8 millimeters of water, with a standard deviation of 15.2 millimeters. The range of observed values varied for different children, but the values obtained for the individual were very consistent, 24 of the 36 children showing differences of five millimeters or less on two different days.

Lambert³ found that the average venous pressure in 100 children was 48.4 millimeters of water, with a standard deviation of 9.5 millimeters. He used the direct method of Moritz and von Tabora and the level of the second intercostal space to the right of the sternum as his zero point. It was possible to convert our results, by using the antero-posterior diameter measurements of the chest, into readings corresponding to those of Lambert. For example, if the anteroposterior diameter of the chest through the second intercostal space to the right of the sternum was found to be fifteen centimeters and the venous pressure was 100 millimeters, 50 millimeters were subtracted from our reading to correct our measurement in terms of Lambert's zero point. All measurements were thus converted. The average after conversion was 48.3 millimeters of water. Lambert's study can be compared only theoretically with our results because the thoracic measurements of his subjects are not recorded. The close correlation between his results and ours, after correction to his zero point, is, however, remarkably striking. Lambert noted no relationship between venous pressure and age, needle bore or degree of cooperation of the patient. Our results confirm this observation.

In 90 normal adults studied by Lyons, et al., whose technic was followed in this study, the extreme range of venous pressure was from 50 to 150 millimeters of water. Eighty per cent of those readings lay between 80 and 130 millimeters, and

Case	Age	Sex	Height in Inches	Weight in Pounds	Anteroposterior Diameter Thorax in Centimeters	Diameter Arm in Centimeters	Body Surface in Square Meters	Arterial Blood Pressure	1st V. P. Detr.	2nd. V. P. Detr.	Average V. P. Detr.
1.	11	F	50	59	14	3.5	.96	105/70	100	95	97
2.	14	F	62	84	13	5.0	1.34	95/60	110	100	105
3.	15	F	64	95	15	6.0	1.46	105/70	90	92	91
4.	12	F	59	80	14	5.0	1.26	110/70	105	100	103
5.	12	M	55	68	16	...	1.12	100/60	105	105	105
6.	10	F	61	83	14	...	1.32	110/70	110	105	107
7.	12	F	56	96	14	...	1.28	115/75	118	115	116
8.	14	F	62	90	15	4.5	1.38	110/70	63	65	64
9.	12	F	52	60	13	4.0	1.00	105/75	90	76	83
10.	13	F	62	104	18	5.0	1.46	110/60	83	89	86
11.	9	F	56	68	14	...	1.14	100/65	95	90	92
12.	10	M	53	62	13	4.0	1.04	105/70	109	115	112
13.	13	M	62	100	16	...	1.44	130/85	100	100	100
14.	10	M	56	75	15	...	1.18	115/80	103	107	105
15.	11	F	51	78	16	4.0	1.08	100/60	100	114	107
16.	11	M	54	73	17	4.5	1.12	115/80	116	114	115
17.	8	M	49	55	14	4.0	.92	110/75	80	75	77
18.	11	F	57	69	14	4.0	1.16	115/70	75	85	80
19.	14	F	62	103	18	4.5	1.46	120/80	75	75	75
20.	8	M	51	68	17	4.5	1.04	115/75	105	110	107
21.	10	M	55	79	16	4.5	1.18	120/80	75	70	72
22.	11	M	54	68	15	4.0	1.10	115/75	95	95	95
23.	12	M	58	77	17	5.0	1.22	95/60	104	88	96
24.	8	M	50	66	17	5.0	1.00	115/70	116	98	107
25.	12	M	55	80	16	4.5	1.18	120/70	128	145	136
26.	14	F	62	99	16	5.0	1.44	125/60	105	120	112
27.	9	F	53	73	15	4.5	1.10	120/70	97	97	97
28.	9	F	48	53	13	4.0	.88	105/65	96	76	86
29.	11	F	51	60	12	4.0	.98	105/77	115	118	116
30.	14	F	60	84	15	5.0	1.30	100/65	110	112	111
31.	12	M	58	90	16	5.0	1.30	110/70	80	83	81
32.	7	M	48	46	13	3.5	.82	110/65	72	72	72
33.	9	M	48	55	14	4.0	.90	120/70	110	108	109
34.	11	M	56	62	14	4.0	1.10	115/70	105	103	104
35.	13	M	59	78	13	4.5	1.26	110/60	95	100	97
36.	11	F	58	80	16	4.5	1.24	105/65	110	97	103

the mean average for the group was 100.6 millimeters. These findings compare favorably with the results shown in Table I. Eighty-three per cent of our measurements lay between 80 and 130 millimeters and the mean average was 97.8 millimeters. There appears to be little difference between the venous pressures in adults and children when they are considered collectively and studied under the same conditions of technic.

Lyons and his collaborators state, "In general, repeated readings in the same individual over several months, using the precautions outlined above, have shown little variation in the level of venous pressure. In a few patients, however, especially those who have difficulty in relaxing, variations of the order of 20 to 30 millimeters occurred". Again our results are confirmatory, in children, of observations made upon adults.

No relationship was noted between venous pressure and age, weight, height, arterial blood pressure, thickness of the arm, sex or body surface area.

SUMMARY AND CONCLUSIONS

In this study the venous pressure of 36 children, between the ages of seven and fifteen years were studied by the modified method of Moritz and von Tabora, as suggested by Lyons, et al. The mean pressure for the group was 97.8 millimeters of water. The following conclusions are drawn:

1. The range of venous pressure in normal children is wide.
2. Venous pressure varies only slightly from day to day in a normal child.

3. A standard technic for venous pressure measurements should be adopted.

4. Inaccurate setting of the zero point of the manometer tube is a great source of error in making venous pressure measurements.

It is suggested that the technic of Lyons be accepted for the establishment of the zero point, as being the most readily reproducible.

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THE OFFICIAL ISSUE

This issue of the JOURNAL carries the Minutes of the Ninety-first Annual Session, the Transactions of the House of Delegates, and the roster of members of the Iowa State Medical Society in good standing as of June 23, 1942. Save this JOURNAL for future reference.

THE KENNY TREATMENT OF INFANTILE PARALYSIS IN THE ACUTE STAGE*

JAMES E. DYSON, M.D., Des Moines

Any complete discussion of poliomyelitis must include the symptoms,¹ such as the muscle spasms, pain and paralysis; the disease, such as etiologic organism, mode of spread, pathology, serum treatment, etc.; and convalescence, such as orthopedic correction of contractures, deformities and paralysis. However, I wish to limit this discussion to the treatment of the symptoms of the acute stage, muscle spasm, pain and paralysis and the prevention of deformities.

Stiffness of the neck and rigidity of the spine have always been our most diagnostic symptoms. This has frequently been followed by pain in the muscles of the part to become paralyzed a day or two later. We have done spinal punctures and repeated drainage of spinal fluid and have given codeine in an attempt to relieve our patients of this pain and muscle spasm. Miss Elizabeth Kenny, a nurse working in the Australia bush without a physician to do spinal punctures, applied hot packs to these aching tender muscles and found that they were relieved of pain in twenty-four hours.² She concluded from her observations that spasm of muscle groups was a more important symptom than muscle weakness of an opposing group. Working on this theory she has applied hot packs to the tender spastic muscles and relaxed them, allowing a weakened opposing muscle to function. She had no one to apply casts or splints and she now contends that muscle spasm is not relaxed by immobilization in a cast, that in fact immobilization over a long period causes muscle atrophy from decreased blood and lymph circulation. Furthermore, if this immobilization is done with the muscle in a shortened resting position a fixation results after the cast is removed which will not allow full extension of the muscle again. This causes limitation of motion of the part and contracture. A good example is the treatment of the deltoid paralysis with the aeroplane splint. When the arm is let down the deltoid is frequently found to be permanently shortened. Immobilization causes fixations which frequently require weeks of physiotherapy to correct. Another cause of fixation is fear of pain. If the muscle is tender the patient abandons voluntary use of the part.

Passive motion of the affected parts is undertaken not only to improve muscle nutrition but to maintain the joint sense and neuromotor association. Miss Kenny calls this neuromotor disassocia-

tion mental alienation. She advocates passive motion of the affected part through a partial arc of its normal motion throughout the acute stage. She thinks a state of muscle incoordination exists, and very early directs the patient's attention to his individual muscles. She teaches him the origin and insertion of each muscle and the arc of its motion. She moves the limb through this arc of motion and then has the patient try the same to keep or recover the individual neuromuscular association. As Steindler³ has so well said, "Poliomyelitis is more than purely a motor deficiency originating in the anterior horn cells. A motor dysfunction seems to reach much higher and produces a state of confusion which blocks the use of the individual paralyzed muscle." * * * Following the concepts of Miss Kenny we are now paying special attention to selective muscle training, trying to make the patient conscious of the action of the individual muscle which appears paralyzed. * * * The physiologists inform us that the passage of a muscle through its complete range of motion at frequent intervals would rather enhance than retard recovery by stimulating venous circulation and lymphatic passages to the affected members. * * * We found, furthermore, that return of muscle strength is more likely to occur in a muscle which is kept at the physiologic optimum of circulation as well as muscle tone. This is definitely not the case in the board-like and unyielding substance of the contracted muscle. The condition should not be paralleled to the stiffness seen in non-paralyzed muscles immobilized for a long period of time. For instance, when a hip spica is applied for Perthes' disease for as long as eighteen months there is some stiffness in the joint after removal of the plaster but this disappears in a few weeks on active physiotherapy and free motion in bed, and it is in no way analogous to the definite shortening of the quadriceps which we see in poliomyelitis cases which have been immobilized as little as four or five weeks. The question may arise whether this contracture is not due to periarticular structures. We observed, however, that the contracture is muscular because the muscle feels indurated and taut; and, when an attempt is made to stretch the muscle by flexing the limb the pain and tenderness are distinctly felt over the muscle belly and not in the articulation." Miss Kenny uses hot packs on these spastic muscles and finds they can be relaxed and function can be returned in the limb.

The prevention of deformities must be considered during the acute stage. There is a relaxation of joint ligaments in poliomyelitis and if a muscle spasm is allowed to continue unrelieved or if an

*Presented before the Iowa State Pediatric Society, Des Moines, April 14, 1942.

immobilization device is ill advisedly used a deformity will persist or a dislocation may even result. Again let me call attention to the treatment of deltoid paralysis by using the aeroplane splint. It may cause a superior luxation of the humerus in the shoulder. Another deformity frequently observed is posterior subluxation of the tibia in the knee.

Miss Kenny uses no splints or casts. The patient is placed on a flat mattress which is pulled up from the foot of the bed far enough to allow the heels or toes to extend over the end, depending on whether the patient is lying on the back or the stomach. A board is attached to the foot of the bed so the patient may rest the soles of the feet against it. Hot packs are applied regularly every day. Passive motion is used but no massage. Rehabilitation is begun as soon as muscle spasm is relieved.

Many cases of respiratory failure are due to muscle spasm of the intercostal and pectoralis muscles and hot packs have been used successfully to relieve this respiratory embarrassment within as short a time as twenty-four hours. The most important part of any treatment is exact diagnosis and that point is imperative in using this treatment. It will take the combined skill of the pediatrician, the orthopedist and the physiotherapist who are well trained and experienced in infantile paralysis to attain success. An early diagnosis of the location and amount of the involvement is necessary. The State University Hospital in Iowa City and the Iowa Lutheran Hospital in Des Moines will be equipped to carry out this treatment this summer. The Lutheran Hospital is equipping a separate quarantine building where the patient with infantile paralysis in the acute stage may come during the infectious period. Miss Louise Agenes, a pediatric nurse, who has been with Miss Kenny for the past six months will direct the treatment. The University of Minnesota continuation center is giving short courses to physicians, nurses and physiotherapists.

CONCLUSIONS

I believe Miss Kenny has given us a new concept of the treatment of the symptoms of poliomyelitis in the acute stage. It relieves pain and muscle spasm. It maintains muscle function, joint function and tends to prevent deformities. It maintains and even re-establishes neuromuscular pathways. I believe it will considerably lessen the percentage of permanent paralysis and deformity.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

CARDIAC HYPERTROPHY IN AN INFANT

SO-CALLED CONGENITAL IDIOPATHIC HYPERTROPHY

LUKE FABER, M.D., Dubuque

Scattered through pediatric literature are accounts of infants or young children dying after brief illnesses in whom the cause of death was said to be congenital idiopathic cardiac hypertrophy. With more complete studies of the heart and other organs, a causal etiologic factor can usually be found to explain the cardiac hypertrophy, and cases in which no such factor can be discovered, that is true idiopathic hypertrophy, are rare. In the following case, a diffuse round cell infiltration of the myocardium was encountered and probably explains the cardiac dilatation and hypertrophy which at first were thought to be of the idiopathic type. However, the etiology of the change in the myocardium remains obscure.

CASE REPORT

Chief Complaint: The patient, a white boy aged eleven months, was admitted to The Finley Hospital, February 9, 1942, because of "shortness of breath, labored breathing and a whining cry."

Family History: The patient was the only child of the parents who were well. He was born after a normal pregnancy and delivery.

Past History: The child had had no previous illness.

Present Illness: Two days before admission, the mother noticed that the child seemed short of breath but thought it was because he had been playing unusually hard. She did not become concerned until the respirations became rapid and labored when she thought he might have "swallowed something that went down the wrong way."

Physical Examination: The patient was a well developed baby boy, eleven months of age, who appeared acutely ill. The respirations were at the rate of 52 per minute, labored and with an expiratory grunt. The head was of normal contour; the anterior fontanel was open and did not bulge. The conjunctivae were normal. There was no edema or ptosis of the eyelids; the pupils were equal and reacted normally. The ear canals were clean; the ear drums were clean and translucent. There was no obstruction of the nose but the nasal mucosa was reddened. The lips were violaceous;

the tongue was moist and clean; the pharynx was of normal color. The neck moved normally and there was no rigidity and there was no spine sign. There was a definite tracheal tug but no abnormal cervical adenopathy. The thorax appeared slightly asymmetrical due to the embarrassed respirations.



Fig. 1. Roentgenogram showing the enlarged heart.

The intercostal spaces were depressed contrasting with the ribs. On percussion the lungs had normal resonance. On auscultation, scattered, crepitant râles were heard over both lung fields, radiating from each hilus. Tactile and vocal fremitus were normal and no friction rub was heard. The abdomen was globoid. There was no distention and no area of rigidity. The edge of the liver was palpable at the right costal border; the kidneys and spleen could not be felt. There were no masses present in the abdomen. The genitalia, except for a pendulous prepuce, were normal. The extremities showed only a violaceous hue to the finger nails. The temperature was 99.4 degrees.

Provisional Clinical Diagnosis: Obstruction to a bronchus (foreign body or mucous plug); acute dilatation of the heart with acute passive congestion; bronchopneumonia.

X-ray Examination: Both lung fields were hazy with increased bronchovascular markings consistent with passive congestion. The findings also suggested an atypical pneumonia such as capillary bronchopneumonia. Both bases showed some hyperaeration, most likely obstructive emphysema. There was no sign of an opaque foreign body in the lung. The heart showed fairly marked enlargement, both to the right and left (Fig. 1).

Course in Hospital: The child was placed in a croup tent at first and later in an oxygen tent. He was given small doses of digitalis. A consulting laryngologist ruled out obstruction to a bronchus but believed it possible that there was a pneumonitis. The heart signs did not change notably before death which occurred about twenty-eight hours after admission.

Final Clinical Diagnosis: Question of congenital heart disease or bronchopneumonia.

Autopsy Abstract: Except for the heart, the essential findings were 200 cubic centimeters of ascitic fluid in the abdomen and 250 cubic centimeters of pleural fluid in each side of the chest. The pericardial sac contained 60 cubic centimeters of clear fluid. The thymus gland weighed 28 grams but was otherwise negative. All the viscera showed acute congestion. In addition, the lungs were moderately edematous. The heart was large and weighed 115 grams (normal 38 grams). All chambers appeared large but this was especially true on the left side. The walls of the right and left ventricles averaged four and eight millimeters in thickness, respectively. There was an irregular grayish-red clot at the apex of the left ventricle. Otherwise the heart was negative. (Fig. 2.) Microscopically the ventricular clot was ante mortem but showed no evidence of infection. Sections of various parts of the myocardium showed a diffuse, round cell infiltration with a moderate increase in the size of the myocardial cells. The endocardium was normal except beneath the thrombus. The lungs showed injection of the blood vessels, slight edema and numerous rather large cells in the alveoli. These seemed to be des-

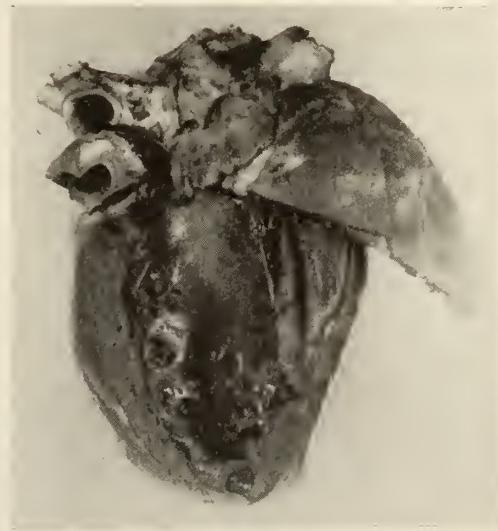


Fig. 2. Photograph of the heart showing dilated left ventricle with hypertrophied myocardium.

quamated alveolar epithelium. The other organs showed only acute congestion.

Final Anatomic Diagnosis: Chronic myocarditis; cardiac dilatation and hypertrophy; left ventricular thrombus; acute congestion of the viscera; pulmonary edema; bilateral pleural effusion; ascites.

Comment: The clinical course in this case was characteristic of those cases which until recently were termed congenital idiopathic cardiac hypertrophy. In this instance the diagnosis was only made after the microscopic examination of the myocardium. In general the clinical course of this group of cases is as follows: An infant or young child previously considered well, suddenly develops dyspnea, rapid, labored respirations, more or less cyanosis and succumbs after a short illness. Physical or roentgen examinations show only an enlarged heart or at times evidences of chronic passive congestion. At autopsy a dilated and hypertrophied heart is the most important gross finding and only when microscopic examination of the myocardium and of other organs is made will a correct diagnosis be possible.

GENERAL DISCUSSION

In 1933 Kugel and Stoloff¹ in an excellent review collected 52 instances of so-called congenital idiopathic cardiac hypertrophy which had been reported in the literature up to 1932 and added seven cases of their own. They classified them into three groups. Group one included cases of pure cardiac hypertrophy with no other pathologic changes and with no recognizable cause; group two covered cases of hypertrophy secondary to myocardial change such as degeneration fibrosis and round cell infiltration; and group three was a questionable series in which complete examinations were not reported and no definite classification could be made. They included 17 cases in group one, 27 in group two and eight in group three. Their seven cases were in group two. From their investigation, they concluded that "so-called congenital idiopathic cardiac hypertrophy is probably seldom if ever really idiopathic," and "when our knowledge of heart disease in children increases so that it equals present knowledge of heart disease in adults, the term congenital idiopathic hypertrophy of the heart may disappear from the literature."

In a recent article Weisman² found 70 cases reported in the literature. He states that 70 per cent of the entire group were under one year of age and about equally divided between the two sexes. Up to 1936, autopsies had been performed on 62, and of these, 22 showed endocardial fibrosis and myocardial degenerative or inflammatory

changes. A few cases showed anomalies of the coronary artery and rarely there has been glycogen storage disease. In an occasional case, the microscopic examination of other organs demonstrated some condition which would explain the cardiac hypertrophy. In other words, a cause is usually found for the cardiac hypertrophy. Probably many cases have not been diagnosed; in our series of 817 autopsies there have been two instances which belonged in group two according to Kugel and Stoloff's classification. In the second case there was definite inflammatory thickening of the endocardium. As in the case presented, no indication of a possible etiologic agent was found.

Kugel and Stoloff point out that the early symptoms of the disease are little known. In most cases death occurs after a brief period of dyspnea and cyanosis in children previously considered well. Probably if these children were seen by a doctor for minor episodes of dyspnea, cyanosis or attacks of fainting, the cardiac hypertrophy might be detected before the acute decompensation. If detected, it should be remembered that the hypertrophy is usually the result of a diseased myocardium and the child should be treated as such. In the past, most of these patients died shortly after the parent noted the dyspnea or cyanosis. In a few cases in which earlier diagnoses have been made during routine examination, improvement has resulted from bed rest and digitalis or some similar therapy. This indicates that with increasing knowledge of the condition and appreciation of the significance of a hypertrophied heart in infants, the outlook in these cases should improve.

REFERENCES

1. Kugel, M. A., and Stoloff, E. Gordon: Dilatation and hypertrophy of the heart in infants and young children. *Am. Jour. Dis. Child.*, xlvi:828-864 (April) 1933.
2. Weisman, Sydney J.: Congenital idiopathic cardiac hypertrophy. *Arch. Path.*, xxxiii:365-371 (March) 1942.

FIREWORKS ACCIDENTS ON JULY 4

The June 20 issue of the *Journal of the American Medical Association* carries a warning against any misguided sense of patriotism which might result in the increased use of fireworks on Independence Day, 1942, and the consequent rise in accidents and deaths from these causes.

State legislation curtailing the sale and use of fireworks during the last five years has materially reduced the injuries resulting from 4th of July celebrations. Total injuries recorded in 1937 were 7,205 and in 1941 the number was 2,039. The number of deaths decreased from twenty in 1937 to eleven in 1941. It must be emphasized that neither legislative effort nor the work of enforcement agencies can be relaxed if a new rise in injuries and deaths is to be prevented.

STATE DEPARTMENT OF HEALTH



ONE HUNDREDTH CASE OF SPOTTED FEVER IN IOWA

The first case of spotted fever for the current season and the one hundredth in Iowa since notification of the initial case in 1933, was reported June 16 from Decatur county in the southern central part of the state. The attending physician, Fred A. Bowman, M.D., Leon, made report to the Department through the office of District Health Service No. 10 at Centerville.

Illness

The patient, J. R. H., a girl five years of age, had onset of symptoms June 5, 1942. Complaints were of drowsiness, headache and fever. Red macules appeared on the face and chest June 7. Due to an unusual prevalence of measles in the community, a tentative diagnosis of this disease was made, and when fever remained elevated, bronchopneumonia had to be considered as a possible complicating factor.

Course

Fever of remittent type continued daily, reaching 104.4 degrees (rectal temperature) in the afternoon with little or no elevation of temperature during the early morning hours. Hyperesthesia and pain attended the combing of hair and passive movement of the limbs. The striking character of the rash, which was generalized with petechial lesions of match-head size, together with the history of an unengorged tick having been removed from the scalp, led to the diagnosis of spotted fever. Sixty cubic centimeters of convalescent spotted fever serum were given intravenously and intramuscularly on June 17. When seen June 18, fever was the same as during preceding days. The rash was beginning to fade, showing brownish pigmentation. On June 19 a serum specimen was reported from the State Hygienic Laboratory as showing a positive agglutination or Weil-Felix reaction in dilutions through 1:640. General condition of the patient was improved on June 20.

IMMUNE RABBIT SERUM (TOPPING) FOR SPOTTED FEVER

Immune rabbit serum developed by Norman H. Topping, M.D., past assistant surgeon, United States Public Health Service, is now available for the treatment of Rocky Mountain spotted fever. To be effective, it is essential that the serum be administered early, preferably within three days after appearance of the rash.

Preparation of Serum

The procedure used by Topping in preparing hyperimmune serum is about as follows: Large rabbits are selected, each animal first receiving two cubic centimeters of Rocky Mountain spotted fever vaccine intravenously. Such treatments are repeated twice a week until a total of eight cubic centimeters has been administered. "After a lapse of eight days, each animal is given subcutaneously one-tenth of a freshly fed infected adult tick (*Dermacentor andersoni*) emulsified in saline. The dosage of virulent tick virus is gradually increased until the rabbits receive one-fourth of an infected tick subcutaneously on two successive days each week. The same dosage is then begun intravenously. The amount is gradually increased until the rabbits are receiving one whole tick intravenously on two successive days each week. This dosage is continued during the period the rabbits are bled. Fifty cubic centimeters of blood are withdrawn from the rabbits twice monthly. The blood is allowed to stand at room temperature over night and the serum is separated by centrifugation and pooled on the following morning. The serum is then concentrated after the method of Felton, by alcohol precipitation and centrifugation at a low temperature. Merthiolate (1:10,000) is used as a preservative, the serum being kept in the refrigerator at four degrees centigrade."¹

Therapeutic Use of Serum

The average amount of serum for the treatment of Rocky Mountain spotted fever is sixty cubic

centimeters. According to Topping, "There is no evidence that this serum is of any value after the rash has been present for three days. It might be well to consider seriously not giving the serum if the disease is of longer duration than that. If it is deemed advisable to administer the serum, the following procedure is recommended:

1. Do a conjunctival test with the normal rabbit serum in the small container provided to test for sensitivity to rabbit protein. If this is negative, proceed with the serum administration.

2. Give one cubic centimeter of serum intramuscularly, buttock preferred. Wait ten minutes, give five cubic centimeters intramuscularly. If there are no reactions by this time, you may proceed and give the remainder of the forty cubic centimeters. An additional twenty cubic centimeters may be given after an elapsed time of about ten hours. Again the intramuscular route is recommended."

Serum Obtainable Through State Department of Health

Physicians who have the opportunity of recognizing a case of Rocky Mountain spotted fever when the rash has been present for not over seventy-two hours, may obtain immune rabbit serum (Topping) by reporting the case, preferably by telephone, to the State Department of Health. Des Moines telephone numbers are 4-9111, extension 137, or 7-1417.

REFERENCE

1. Topping, Norman H.: Rocky Mountain spotted fever. Pub. Health Rep., lv:41-46 (January 12) 1940.

SYMPTOMATOLOGY IN BRUCELLOSIS OF MAN

Frequency of symptoms as stated on 1,011 case reports completed by Iowa physicians for the State Department of Health from 1935 to 1941 is recorded as follows:

Complaint	Frequency	Percentage of Total
Fever	719	71
Chills	367	36
Sweating	345	34
Weakness	344	34
Malaise	308	30
Headache	308	30
Muscle, joint pains	234	23
Backache	129	13
Anorexia	114	11
Loss of Weight	105	10
Cough	78	8
Abdominal Discomfort	76	7
Leg Ache	37	4
Lassitude	31	3
Neck Stiffness	28	3
Constipation	26	3
Irritability	25	2
Dizziness	19	2
Diarrhea	17	2
Chilliness	16	2
Other symptoms combined	39	4

BRUCELLOSIS FORUM

A forum on the subject of brucellosis was held at the Chieftain Hotel, Council Bluffs on the evening of June 23 beginning at 6:30 p. m. The meeting was arranged under the auspices of the Pottawattamie County Medical Society, for physicians and veterinarians of southwest Iowa and other interested persons.

Names of speakers who participated in the program and aspects of brucellosis as presented are listed as follows:

PROGRAM

1. Brucellosis in Iowa—Dr. C. C. Franks, Chief of Division of Animal Industry, Department of Agriculture, Des Moines, Iowa.
2. Swine Brucellosis—Dr. F. H. McNutt, Veterinary Department, Iowa State College, Ames, Iowa.
3. Prevalence of Human Brucellosis in Iowa—Carl F. Jordan, M.D., Director, Division of Preventable Diseases, State Department of Health, Des Moines, Iowa.
4. The Laboratory Aspects of Brucellosis—Dr. I. H. Borts, Associate Director, State Hygienic Laboratories, Iowa City, Iowa.
5. Clinical Diagnosis of Brucellosis—Dr. H. S. Frenkel, Clarinda, Iowa.
6. Treatment of Brucellosis—Doctors Harris and Joynt. Dr. Harris is with the State Department of Health, while Dr. Joynt is located at Marcus, Iowa, the site of the recent outbreak of human brucellosis.
7. Control of Brucellosis—Dr. J. A. Merchant, Veterinary Department, Professor of Bacteriology, Iowa State College, Ames, Iowa.
8. Discussion of the Brucellosis Problem—Dr. J. A. Barger, Inspector in Charge, U. S. Bureau of Animal Industry, Des Moines, Iowa.

PREVALENCE OF DISEASE

Disease	May '42	Apr. '42	May '41	Most Cases Reported From
Diphtheria	9	30	8	Cedar, Woodbury, Black Hawk, Iowa, Jones, Polk, Poweshiek
Scarlet Fever	131	240	109	For the State
Typhoid Fever	5	3	6	Floyd, Guthrie, Madison, Pottawattamie, Washington
Smallpox	3	4	29	Boone, Dallas, Polk
Measles	1,166	1,356	765	Black Hawk, Linn, Mahaska, Pottawattamie, Washington, Woodbury
Whooping Cough ..	77	104	199	Des Moines, Scott, Dubuque, Floyd
Brucellosis	42	16	22	For the State
Chickenpox	414	464	316	Woodbury, Boone
German Measles ..	16	18	17	For the State
Influenza	1	12	32	Cass
Mumps	441	750	749	Dubuque, Linn, Des Moines
Pneumonia	110	227	56	For the State
Poliomyelitis	0	0	1	For the State
Tuberculosis	14	19	54	For the State
Gonorrhea	92	138	99	For the State
Syphilis	233	253	185	For the State

The JOURNAL of the Iowa State Medical Society

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THE KENNY TREATMENT OF POLIOMYELITIS PATIENTS

Elsewhere in this issue of the JOURNAL is a discussion of the Kenny treatment of poliomyelitis by Dr. James E. Dyson of Des Moines. Dr. Dyson and Dr. Dwight C. Wirtz attended the clinics at Minneapolis and observed Miss Kenny's work for a ten-day period in June. These doctors returned to Des Moines enthused by what they had seen. They are convinced that the Kenny method is superior to any method of treating poliomyelitis which has been advocated up to date.

As a result of their interest provisions have been made in connection with the Iowa Lutheran Hospital for a poliomyelitis isolation unit with a bed capacity of twelve patients. This unit will be under the direct supervision of Mrs. Louise Nevlin who has taken a special six months' course of instruction under Miss Kenny. Thus she is a certified technician qualified to give the treatments, correct the muscle incoordination and conduct muscle re-education as outlined in the Kenny method of treatment.

This is the first place in the middle west that a private hospital has opened a pavilion for the care and treatment of infantile paralysis patients during the quarantine period. A diagnostic clinic for the examination of the older cases will be conducted every Thursday at 10:00 a. m. by Drs. Dyson and Wirtz and Mrs. Nevlin.

It is our understanding that the staff of the unit is an open one and that physicians throughout the state who encounter cases of poliomyelitis during the oncoming season may use the facilities which this institution offers. The JOURNAL is in no position to draw definite conclusions as to the

value of the much discussed Kenny treatment, but we are impressed with the opportunity that the establishment of the Lutheran Hospital Unit will provide for observation of this method of treatment in actual operation.

THE NINETY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION

What the Atlantic City Press-Union dubbed "The Biggest Medical Show on Earth" closed on Friday, June 12. This paper is also authority for the statement that the convention occupied five acres of floor space, that 2,300 men worked for nine days to assemble the scientific and commercial exhibits and that after the American Medical Association closed its Eleventh Atlantic City session it would take the same number of men five days to dismantle it. The registration of 8,238 far exceeded expectations. Less than fifty registered from Iowa.

The immense air-conditioned Convention Hall housed the entire convention. An auditorium seating about five thousand was used for the general sessions. The section meetings attracted an average of a thousand, with seats for all; even the loud speakers worked. From four to six motion picture theaters operated at one time and there were rooms for discussion of special subjects such as diabetes and the Kenny treatment of poliomyelitis. The hotel accommodations were adequate in every way and reasonably priced. Satisfactory food could be purchased at any "pocket-book level."

This meeting had been designated a Pan-American Session. War prevented all but eleven scientific exhibits from reaching the United States. One hundred and forty visitors registered from Latin America. The program presented by these gentlemen was outstanding and their scientific work far exceeded the expectations of the average listener. The address of Benevenuta R. Dino of the Philippines before the House of Delegates was one of the highlights of the session.

The Scientific Exhibit reached a new high in decorative elegance. The exhibitors were tireless in their efforts to explain their work and the opinion was generally expressed that this exhibit was a teaching force that was the equal, if not the superior, of the scientific programs. The Technical Exhibit on the first floor was more attractive than ever. It is surprising how much free Coca-Cola eight thousand doctors can consume.

The Scientific meetings were on the usual high plane. The attendance was usually limited only by the seating capacity. Three general meetings

were of special interest: one program sponsored by the Pan-American guests; another devoted to war problems; and the third of special interest to the Iowa delegation was devoted to subjects concerning general medicine. This last program is a new departure which has been under consideration for several years and more than proved its value. The Woman's Auxiliary is growing in members and importance. Its meetings were well attended and its future as a potent factor in the many activities associated with the American Medical Association is assured.

The House of Delegates dealt with its problems in its usual deliberate manner. By referring all resolutions to reference committees ample time is given for careful consideration of any question. Open discussions are encouraged and the work done by these committees cannot be praised too highly. The stamp of approval was placed in a general way upon medical service plans, and post-war postgraduate work for doctors in the service was recommended. The address by Mr. Paul V. McNutt, Federal Security Administrator, before the House of Delegates has been made the feature article in the June 20 issue of the *Journal of the American Medical Association*. This deserves the careful study of every member of the Iowa State Medical Society. Mr. McNutt was well received by the members of the House. His statements of hard facts were driven home to every member. It should be noted that the Procurement and Assignment Service was *not* imposed by the government but was set up at the suggestion of the medical profession and has not produced enough physicians for the four war groups, that is, the Army and Navy, industrial, civilian and rehabilitation services. This service "will not continue after the war and 'all out' collaboration does not involve any theoretical assaults on, or support of, any theory of medical practice. . . . The voluntary plan must work and work promptly, or some other more vigorous plan will have to be produced. . . . Yours is an important profession. It is the first to require rationing, rationing which will make sure that there are enough doctors to meet the needs of every unit of the home front and of the battle front. The issue is who shall do the rationing, for America must have the doctors it needs."

As we pass the ninety-third milestone we are assured that the standards of medical education will not be lowered and that scientific research will continue. A determined profession will make the Procurement and Assignment Service an outstanding success.

MALPRACTICE ACTIONS IN MILITARY SERVICE

That a suit for malpractice may be brought against a physician while he is in military service is probably not realized by a great many physicians, particularly the younger men who are going directly from hospital internships into the armed forces and who have not previously purchased medical protective insurance. Yet such seems to be the fact. An editorial appearing in the September 13, 1941 issue of the *Journal of the American Medical Association* describes the situation in detail. Malpractice suits of this sort apparently are extremely uncommon, yet they can occur.

In the event that suit is brought against a medical officer for alleged malpractice in the performance of his official duties it is altogether likely that the defendant would have the case removed to a federal court and would be defended by a United States Attorney designated by the Department of Justice. However, if the defendant loses the case and a judgment is secured against him there is no legal provision by which the government could be made to pay the judgment.

It would seem highly desirable, therefore, that physicians who are in, or who are about to go in, active military service, should have in mind this liability to malpractice action while they are in military service. They should make sure that their medical protective policies of civilian life are not allowed to lapse. The JOURNAL has consulted a representative of one of the medical protective insurance companies, and has been told that the physician's present protective policy remains effective during his service with the military forces, but that renewals must be made as in civilian practice. Inquiry was also made as to whether or not a physician who holds a policy would be defended by the insurance company attorney or by a government appointed attorney, in case action should be brought against him. We were told that the insurance company would assume responsibilities of the defense exactly as it does in non-military practice.

Another point we would like to bring to the attention of physicians is that because of the rarity of malpractice action in the military service, a sharp reduction in rates has been made for the physician in the armed forces. However, this lower rate cannot be secured if a civilian partnership continues in force.

Minutes of the Iowa State Medical Society Ninety-first Annual Session

April 15, 16 and 17, 1942

Wednesday Morning, April 15, 1942

The opening session of the Ninety-first Annual Session of the Iowa State Medical Society, held at the Hotel Fort Des Moines in Des Moines, April 15 to 17, 1942, was called to order by the president, Dr. Earl B. Bush of Ames, at nine-fifteen a. m.

Dr. James E. Dyson, president of the Polk County Medical Society, welcomed the physicians to Des Moines, and Dr. George C. Albright of Iowa City, second vice president of the Iowa State Medical Society, responded for the Society.

The first address of the meeting was given by Dr. John A. Toomey of Cleveland. Dr. Toomey gave an excellent talk on the subject: "Differential Diagnosis of Meningeal Irritations." After a brief intermission to visit exhibits, the meeting was again called to order and Dr. James T. Priestley of Rochester, Minnesota, discussed the subject: "Carcinoma of the Stomach". Following this Dr. Bush relinquished the time allotted for his presidential address and asked Dr. Thomas F. Suchomel of Cedar Rapids, chairman of the Procurement and Assignment Service in Iowa, to tell the group of the work of this administration. The meeting adjourned at eleven-thirty a. m.

Thursday Morning, April 16, 1942

The Thursday morning session was called to order by the president, Dr. Bush, at nine-ten a. m. Dr. Walter L. Bierring introduced the first guest speaker, Dr. Reginald Fitz of Boston. Dr. Fitz conducted a clinic, and presented local patients to illustrate his points. Following his talk, Dr. Sumner L. Koch of Chicago addressed the group on the subject: "Treatment of Raw Surfaces Resulting from Burns and Injuries".

After a five minute intermission, Dr. John L.

McKelvey of Minneapolis, Minnesota, gave a talk on: "Cesarean Section", and he was followed by Dr. French K. Hansel of St. Louis who discussed: "Allergy". The meeting adjourned at eleven forty-five a. m.

Friday Morning, April 17, 1942

Dr. William R. Cubbins of Chicago acted as chairman of a symposium on injuries presented at the Friday morning session. Dr. Dwight C. Wirtz of Des Moines discussed: "Compound Fractures"; Dr. Edward H. Files of Cedar Rapids: "Nerve Injuries"; Dr. Albert I. Haugen of Ames: "Head Injuries"; and Dr. George P. Elvidge of Perry: "Chest Injuries". Dr. Cubbins summed up the symposium, following which there was a short recess. Dr. Bush then called the meeting to order and introduced Colonel John I. Marker, M.C., of Davenport. Dr. Marker explained a new procedure to be followed in the Procurement and Assignment Service in enrolling doctors in service. A report of the transactions of the House of Delegates was given by the secretary, Dr. Robert L. Parker. Total registration for the meeting, as reported by Dr. Parker, consisted of 729 members, 92 exhibitors, 75 guests, and 200 members of the Woman's Auxiliary, making a total of 1,096 persons in attendance.

Dr. Bush installed Dr. Frank P. Winkler of Sibley as the new president. Dr. Winkler made a few remarks, and introduced the president-elect, Dr. Lee Roy Woodward of Mason City, who also spoke briefly.

Dr. Roy W. Fouts of Omaha, Nebraska, was the final speaker on the morning program. Dr. Fouts arrived just before noon, and talked to the group for an hour on problems related to Procurement and Assignment, the need for physicians in the armed forces and procedures to be followed. The meeting adjourned at twelve forty-five p. m.

Section on Medicine

Wednesday Afternoon, April 15, 1942

The first session of the Section on Medicine held in connection with the Ninety-first Annual Session of the Iowa State Medical Society, at the Hotel Fort Des Moines in Des Moines, was called to order at two p. m. Wednesday afternoon, April 15, by the chairman of the section, Dr. Albert A. Schultz of Fort Dodge.

The first paper of the afternoon was presented by the guest speaker, Dr. John A. Toomey of Cleveland. Dr. Toomey discussed: "Lesions About the Eyes in Acute Infectious Diseases". After his address, the following papers were given:

"Symptoms of Pulmonary Disease" by Dr. Leon

J. Galinsky of Oakdale; discussed by Dr. J. Carl Painter of Dubuque and Dr. John Russell of Des Moines.

"Useful Drugs" by Dr. Horace M. Korns of Iowa City; discussed by Dr. John C. Shrader of Fort Dodge and Dr. Eugene B. Floersch of Council Bluffs.

"Hypothyroidism and Heart Disease" by Dr. Carl W. Smith of Dubuque; discussed by Dr. E. Marsh Williams of Oskaloosa and Dr. Samuel P. Leinbach of Belmond.

"Massive Gastroduodenal Hemorrhage" by Dr. John L. Kestel of Waterloo; discussed by Dr. Harry A. Collins of Des Moines.

The meeting adjourned at four-thirty o'clock.

Thursday Afternoon, April 16, 1942

Dr. Reginald Fitz of Boston opened the Thursday afternoon session by a talk entitled: "Concerning Certain Peculiarities of Gallstone Disease". Following this talk Dr. Harold W. Morgan of Mason City conducted a clinical pathologic conference. Two papers were next given, as follows:

"Differential Diagnosis of Jaundice" by Dr. J. Stuart McQuiston of Cedar Rapids; discussed by Dr. Fred Sternagel of West Des Moines and Dr. Allen C. Starry of Sioux City.

"Laboratory and Clinical Findings in Pancreatic Disease" by Dr. Milo G. Meyer of Marshalltown;

discussed by Dr. Fred H. Lamb of Davenport and Dr. William D. Paul of Iowa City.

The final presentation was a symposium on the use of sulfonamides. Dr. Herman J. Smith of Des Moines acted as chairman, and also gave a brief summing up of the use of the sulfonamides in pneumonia. Dr. Dennis H. Kelly of Des Moines discussed the pediatric angle; Dr. William R. Hornaday the genito-urinary; Dr. Benjamin F. Kilgore considered their uses in eye, ear, nose and throat conditions; Dr. Conan J. Peisen in gastro-intestinal disorders; and Dr. Diedrich J. Haines concluded the symposium by a talk on hematology in sulfonamide administration. The meeting adjourned at five-fifteen p. m.

Section on Surgery

Wednesday Afternoon, April 15, 1942

The opening session of the Section on Surgery, held in connection with the Ninety-first Annual Session of the Iowa State Medical Society, was called to order by the chairman of the section, Dr. Thomas F. Suchomel of Cedar Rapids, at two p. m. Dr. James T. Priestley of Rochester gave the first address on the program, discussing the subject: "Choice of Treatment for Duodenal Ulcer." After his talk, the following papers were presented:

"Factors in Lowering Mortality of Ruptured Appendicitis" by Dr. Alfred A. Eggleston of Burlington; discussed by Dr. Carl H. Matthey of Davenport and Dr. Howard I. Down of Sioux City.

"Inguinal Hernia" by Dr. Barclay J. Moon of Cedar Rapids; discussed by Dr. George H. Clark of Oskaloosa.

"Acute Abdominal Emergencies" by Dr. Bernard J. Dierker of Fort Madison; discussed by Dr. James C. Donahue of Centerville and Dr. Adrian J. Schroeder of Marshalltown.

"Review of Diseases of the Pancreas" by Dr. Ernest M. Kersten of Fort Dodge; discussed by Dr. Prince E. Sawyer of Sioux City and Dr. Walter E. Foley of Davenport.

The meeting adjourned at four-thirty p. m.

Thursday Afternoon, April 16, 1942

The second meeting of the section on surgery was opened by a talk by Dr. William R. Cubbins of Chicago on the subject: "Fractures Around the Knee Joint."

The second paper was presented by Dr. John L. McKelvey of Minneapolis, obstetric guest speaker, who discussed: "Etiology and Treatment of Premature Separation of the Normally Implanted Placenta."

Three papers by doctors from Iowa were then given as follows:

"Primary Fractures of the Hip" by Dr. Henry F. Dolan of Anamosa; discussed by Dr. Carl J. Lohmann of Burlington and Dr. William G. Bessmer of Davenport.

"Genital Prolapse" by Dr. Robert M. Collins of Council Bluffs; discussed by Dr. Addison W. Brown of Des Moines and Dr. Cecil W. Seibert of Waterloo.

"Practical Application of Prenatal and Postnatal Care" by Dr. Cecil W. Seibert of Waterloo; discussed by Dr. Roderick F. MacDougal of Cedar Rapids.

The meeting adjourned at four-thirty p. m.

Section on Ophthalmology, Otology
and Rhinolaryngology

Wednesday Afternoon, April 15, 1942

The opening meeting of the Section of Ophthalmology, Otology and Rhinolaryngology was called to order by the chairman, Dr. F. E. Powers of Boone, at two p. m. in Room 1124 of the Hotel Fort Des Moines.

The first paper of the afternoon was presented by Dr. John C. Cunningham of Dubuque, on the subject: "Unilateral Exophthalmos Caused by Arteriovenous Aneurysm." There were no discussers.

Dr. Gordon F. Harkness of Davenport then discussed the subject: "Physiology of the Larynx and

Phonation"; this was discussed by Dr. Ralph C. Carpenter of Marshalltown and Dr. Cecil C. Jones of Des Moines.

"Retinitis Pigmentosa" was the subject of the next paper, presented by Dr. Jesse H. McNamee of Des Moines; discussed by Dr. Willis L. McConkie of Carroll and Dr. William P. Hoffmann of Davenport.

Dr. Cecil S. O'Brien of Iowa City next spoke on: "Glaucoma"; his paper was discussed by Dr. L. A. Taylor of Ottumwa and Dr. Roger R. Flickinger of Mason City.

The final paper of the afternoon was presented

by the guest speaker, Dr. Oscar B. Nugent of Chicago. Dr. Nugent talked on: "Newer Methods of Treating Strabismus". Following his address, there was a social hour, and the meeting adjourned at six p. m.

Thursday Afternoon, April 16, 1942

The program for the second afternoon section meeting was opened by Dr. James A. Downing of Des Moines discussing: "Traumatic Mediastinitis". This was discussed by Dr. John C. Parsons of Des Moines from an internist's viewpoint and by Dr. Dean M. Lierle of Iowa City.

Dr. Wayne J. Foster of Cedar Rapids gave a

paper on: "Nasal Obstruction"; this was discussed by Dr. Martin J. Ryan of Sioux City.

"Office Procedures in Ophthalmology" was the title of a paper presented by Dr. Joseph E. Dvorak of Sioux City and discussed by Dr. Orval L. Thorburn of Ames and Dr. Garfield M. Thein of Oelwein.

"Chronic Catarrhal Otitis Media" was the subject of the fourth paper of the afternoon. It was presented by Dr. Dean M. Lierle of Iowa City and discussed by Dr. Frank G. Carlson of Mason City and Dr. Harold O. Gardner of Waterloo.

The guest speaker, Dr. French K. Hansel of St. Louis, closed the meeting with his talk on "Allergy in Otolaryngology". The meeting adjourned at five p. m.

Transactions of the House of Delegates Iowa State Medical Society, Ninety-first Annual Session April 15, 16 and 17, 1942

Wednesday Afternoon, April 15, 1942

The first session of the House of Delegates of the Iowa State Medical Society, held in connection with the Ninety-first Annual Session, at Hotel Fort Des Moines, Des Moines, Iowa, April 15, 1942, convened at three fifty-five o'clock, in the Cabin, Dr. Frank P. Winkler, Sibley, President-Elect and Speaker, presiding.

The Speaker: The Ninety-first Session of the House of Delegates of the Iowa State Medical Society will now come to order. The first order of business will be the roll call.

Secretary Parker: Mr. Speaker, I move that the signed cards constitute the official roll call.

The motion was seconded.

The Speaker: You have heard the motion. It has been seconded. Is there any discussion? All in favor say "aye"; contrary "no." *The motion is carried.*

The roll call showed the following delegates, alternates and state society officers present:

Delegates

Adams.....	C. L. Bain
Allamakee.....	J. W. Thornton
Black Hawk.....	E. E. Magee
Boone.....	A. B. Deering
Bremer.....	L. D. Jay
Buchanan.....	F. F. Agnew
Buena Vista.....	M. A. Armstrong
Butler.....	Bruce Ensley
Cerro Gordo.....	H. D. Fallows
Cherokee.....	C. F. Obermann
Chickasaw.....	P. E. Gardner
Clarke.....	C. R. Harken
Clinton.....	R. J. Nelson
Decatur.....	G. P. Reed
Des Moines.....	F. G. Ober
Dubuque.....	T. L. Ward
Emmet.....	M. T. Morton
Floyd.....	O. H. Banton
Fremont	Kenneth Murchison
Greene.....	G. W. Franklin

Henry.....	W. A. Sternberg
Iowa.....	H. G. Moershel
Jasper.....	J. C. Hill
Jefferson.....	J. S. Gaumer
Johnson.....	G. C. Albright
Johnson.....	A. W. Bennett
Kossuth.....	R. M. Wallace
Lee.....	B. J. Dierker
Linn.....	T. F. Suchomel
Louisa.....	L. E. Weber
Lucas.....	S. L. Throckmorton
Madison.....	I. K. Sayre
Mahaska.....	E. M. Williams
Marion.....	H. E. White
Marshall.....	A. D. Woods
Monona.....	J. S. Deering
Montgomery.....	W. S. Reiley
O'Brien.....	W. R. Brock
Pocahontas.....	F. L. Blair, Jr.
Polk.....	W. E. Baker
Polk.....	F. W. Fordyce
Polk.....	L. F. Hill
Polk.....	O. A. Elliott
Polk.....	J. B. Priestley
Pottawattamie.....	G. V. Caughlan
Poweshiek.....	S. D. Porter
Ringgold.....	E. J. Watson
Scott.....	George Braunlich
Scott.....	W. C. Goenne
Story.....	Ernest McFarland
Tama.....	Ira D. Nelson
Union.....	A. F. Watts
Van Buren.....	L. A. Coffin
Wapello.....	C. A. Henry
Warren.....	C. A. Trueblood
Webster.....	J. C. Shrader
Winneshiek.....	F. A. Hennessy
Woodbury.....	A. C. Starry
Woodbury.....	H. I. Down
Worth.....	S. S. Westly
Wright.....	R. D. Bernard

Alternates

Audubon.....	L. E. Jensen
Carroll.....	O. P. Morganthaler
Cass.....	R. L. Barnett
Clay.....	C. C. Collester
Grundy.....	R. T. Spain

Jackson.....	F. J. Swift
Linn.....	H. L. Van Winkle
Monroe.....	T. E. Gutch
Osceola.....	H. B. Paulsen
Page.....	J. F. Aldrich

State Society Officers

President-elect.....	F. P. Winkler
Secretary.....	R. L. Parker
Treasurer.....	J. A. Downing
Trustee.....	O. J. Fay
Trustee.....	L. R. Woodward
Councilor.....	L. L. Carr
Councilor.....	C. H. Cretzmeyer
Councilor.....	J. B. Knipe
Councilor.....	J. E. Reeder
Councilor.....	E. F. Beeh
Councilor.....	C. W. Ellyson
Councilor.....	H. A. Householder
Councilor.....	C. A. Boice
Councilor.....	R. C. Gutch
Councilor.....	J. G. Macrae
Councilor.....	M. C. Hennessy

The Speaker: The next order of business is the

approval of the minutes of the Friday morning session, 1941.

Dr. C. A. Boice: Mr. Speaker, I move that the minutes be approved as printed in the July JOURNAL.

Secretary Parker: I second the motion.

The Speaker: You have heard the motion. It has been seconded. All in favor say "aye"; contrary "no." *The motion is carried.* Next will be the report of the Secretary.

Dr. Householder: I move that the reports of the officers and committees as published in the handbook be received and approved, subject to supplemental reports.

The Speaker: Received and approved?

Dr. Householder: Received and approved.

The motion was seconded.

The Speaker: You have heard the motion. It has been seconded. All in favor say "aye"; contrary "no." *The motion is carried.*

Reports of Officers

REPORT OF THE SECRETARY

House of Delegates, Iowa State Medical Society:

The following report for the year 1941 is here-with respectfully submitted:

MEMBERSHIP

A tabulation of the membership record for 1941 will be found on the following pages, but it may be summarized as follows:

Active Members (Life Members included).....	2,478
Delinquent Members	20
Eligible Non-Members	175
Ineligible Non-Members	77
Physicians Not in Practice or Retired.....	175

This shows that our total membership gained three in 1941. We must take into consideration, however, the fact that many men were called into military service and very few young physicians located in the state during the year. The State Society waived dues for men in service when the county society first took that step, and as a result 65 doctors were carried in good standing without payment of dues. In addition to this, 167 life members were also carried without payment of dues. Both of these groups of physicians were entitled to all of the privileges of membership, which we think they deserved. We mention the number only to show that the income from dues was curtailed last year, and will be curtailed even more this year when so many more are in service.

We had four less delinquent members in 1941 than in 1940, 27 less eligible non-members, eight less ineligible physicians, and three more retired physicians. It was noticeable that some doctors who had not belonged to their county and state societies for several years renewed their membership during 1941. This same condition was true in other parts of the

United States; we feel it may have been due to a feeling that solidarity is necessary in times like these. Regardless of cause, however, we welcome these men back into membership, and hope they will continue their affiliation with organized medicine. Their support is deeply appreciated.

One Hundred Per Cent Counties

In 1940 we had 34 counties with one hundred per cent membership; in 1941 this increased to 36. Ten counties attained this prized mark, while eight others which had held it in 1940 did not reach it in 1941. We hope that 1942 will again find them one hundred per cent. The roll of honor for 1941 is as follows:

Adair	Lucas
Adams	Lyon
Audubon	Madison
Boone	Mahaska
Calhoun	Monona
Cerro Gordo	Montgomery
Chickasaw	Osceola
Clarke	Palo Alto
Davis	Poweshiek
Dickinson	Sac
Emmet	Scott
Floyd	Story
Hardin	Tama
Henry	Taylor
Howard	Union
Humboldt	Wayne
Ida	Webster
Louisa	Worth

Newcomers listed above are Audubon, Calhoun, Clarke, Henry, Lucas, Lyon, Mahaska, Taylor, Union and Worth. Those who failed in 1941 are Buchanan, Buena Vista, Grundy, Marshall, Muscatine, Shelby, Washington and Wright.

The total membership percentage is higher than it has ever been, 92.7 per cent, of which we may well be proud.

We are indebted to the county society secretaries for the information contained in this portion of the report. Twice a year they furnish us with accurate

information concerning the physicians in their county, and this enables us to keep our records up to date at all times and able to supply information when requested. Hardly a day passes but what we receive one or more inquiries about a physician in some part of the state, and we are always happy when we can give the right answer without hesitation.

Life Members

You may have noted that there were eighteen fewer life members this year than last. This is due to the fact that the House of Delegates in 1941, following the report of the Life Membership Committee, rejected all requests for life membership and asked the Committee on Constitution and By-Laws to clarify the ruling regarding life membership. You will hear from that Committee shortly with its recommendations. Until a new rule is passed, in all probability no more requests can be granted because of the present uncertain status of the rule.

Care of the Indigent

Last year we reported that the Medical Economics Committee had started to make a survey of relief plans in force throughout the state. That work has been continued and has now narrowed down to the last stages of investigation. The Medical Economics Committee will have more to report on this.

Medical Preparedness

Medical preparedness continued to be one of the big problems confronting your central office during the year. The chairman of the Medical Preparedness Committee completed the survey of each county and reported to the American Medical Association the status of every physician in the state. The central office spent much time in trying to provide physicians for communities whose only doctor had been called into service. We do not claim to have been very successful, but we have been aided in this work by the efforts of the county medical societies to provide adequate care through the establishment of part time office attendance. We were instrumental in procuring the passage of a ruling from the State Board of Medical Examiners that men serving two localities with the sanction of their county medical society would not be liable for payment of the itinerant physician fee during the emergency. This has eased the situation in some counties.

Civilian Defense

All during the last six months of 1941 the central office and the chairman of the Medical Preparedness Committee tried to organize civilian defense groups in each county. However, it was not until after December 7 that much work was done, and then it was felt wise to have someone appointed to take charge of that particular activity. We were fortunate enough to have Dr. Thomas A. Burcham accept the responsibility, and under his direction the work has gone forward rapidly.

State Society Services

The central office of the State Society exists to serve every committee and every member. It is

your office, and although our record is not perfect, we do make an effort to answer every request. We want to serve as a clearing house, and we hope every physician in Iowa will feel that he has every right to call upon us for help if he needs it.

Financial Report

The financial report for the year 1941 will be found in detail in the treasurer's report which follows this one. The income and expenses of the Society are given in summarized form to show you the various sources of income, and the channels of distribution. The net worth is also shown.

The books of the Society have been audited by a certified public accountant, Widdup and Company, and a copy of the report is on file in the central office as well as in the offices of Dr. L. R. Woodward of Mason City and Dr. O. J. Fay of Des Moines. This report is open to all members of the society any time during office hours.

Robert L. Parker, Secretary

1941 MEMBERSHIP RECORD

County	1941 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage of Eligible Physicians Who Are Members
Adair	8	...	...	...	1	100
Adams	7	...	...	...	...	100
Allamakee	8	...	2	2	...	80
Appanoose	17	...	3	...	...	85
Audubon	10	...	2	...	...	100
Benton	20	...	2	...	1	91
Black Hawk	64	...	2	6	4	95
Boone	22	...	...	...	2	100
Bremer	15	1	3	1	...	79
Buchanan	23	2	1	1	...	92
Buena Vista	16	1	1	...	1	89
Butler	11	1	2	...	...	79
Calhoun	21	...	5	...	1	100
Carroll	22	...	5	...	3	81
Cass	19	...	1	...	...	95
Cedar	10	1	5	...	...	63
Cerro Gordo	49	...	...	2	1	100
Cherokee	18	1	...	2	5	95
Chickasaw	17	...	...	...	...	100
Clarke	9	...	2	...	...	100
Clay	13	...	2	2	...	87
Clayton	16	1	4	...	1	76
Clinton	44	...	2	2	1	96
Crawford	11	...	4	...	...	73
Dallas-Guthrie	41	1	4	1	1	89
Davis	11	...	...	...	...	100
Decatur	8	...	2	...	...	80
Delaware	11	1	5	...	...	65
Des Moines	36	...	1	1	...	97
Dickinson	13	...	...	...	...	100
Dubuque	71	...	2	...	2	97
Emmet	14	...	...	...	...	100
Fayette	23	1	10	1	1	68
Floyd	16	...	...	1	1	100
Franklin	12	...	2	...	...	86
Fremont	11	...	1	...	...	92
Greene	22	...	1	...	1	96
Grundy	11	1	...	...	...	92
Hamilton	16	1	2	...	1	85
Hancock-Winnebago	20	...	4	...	3	83
Hardin	26	...	...	...	5	100
Harrison	13	1	3	1	...	76
Henry	19	...	...	...	...	100
Howard	10	...	...	...	...	100
Humboldt	10	...	...	...	...	100
Ida	13	...	...	...	2	100
Iowa	11	...	4	...	4	73
Jackson	16	...	3	1	1	84
Jasper	24	1	3	...	2	86
Jefferson	17	...	1	1	2	94
Johnson	159	...	9	...	3	95
Jones	13	...	1	1	...	93
Keokuk	16	...	1	2	...	93
Kossuth	13	...	1	2	1	93
Lee	40	...	2	4	1	95
Linn	105	1	7	2	4	93
Louisa	9	...	...	1	2	100

County	1941 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage of Eligible Physicians Who Are Members
Lucas	13	....	....	....	1	100
Lyon	10	....	....	....	1	100
Madison	11	....	....	....	1	100
Mahaska	25	....	....	1	2	100
Marion	21	....	1	1	14	95
Marshall	44	....	1	....	2	98
Mills	10	....	1	....	....	91
Mitchell	13	....	3	....	....	81
Monona	15	....	....	....	1	100
Monroe	10	....	3	....	....	77
Montgomery	18	....	....	....	1	100
Muscatine	20	....	....	1	1	95
O'Brien	17	....	....	1	....	94
Oscoda	9	....	....	....	....	100
Page	20	....	3	1	3	87
Palo Alto	14	....	....	....	....	100
Plymouth	15	....	....	5	2	75
Pocahontas	17	....	....	3	1	85
Polk	242	3	23	13	68	90
Pottawattamie	59	....	7	2	2	89
Poweshiek	23	....	....	1	....	100
Ringgold	7	....	....	1	....	88
Sac	19	....	....	....	....	100
Scott	91	....	....	11	3	100
Shelby	7	1	2	....	1	70
Sioux	18	....	2	....	....	90
Story	36	....	....	....	1	100
Tama	22	....	....	....	2	100
Taylor	7	....	....	....	1	100
Union	14	....	....	....	....	100
Van Buren	11	....	1	....	....	92
Wapello	45	....	2	2	....	96
Warren	10	....	2	....	1	84
Washington	20	....	....	1	....	95
Wayne	11	....	....	....	....	100
Webster	45	....	....	1	2	100
Winneshiek	17	....	....	1	1	94
Woodbury	123	....	3	6	4	98
Worth	6	....	....	....	....	100
Wright	23	....	1	....	2	96
Total	2,478	20	175	77	175	92.7%

REPORT OF THE TREASURER

House of Delegates, Iowa State Medical Society:

Herewith I give you the report of the 1941 financial transactions of the Iowa State Medical Society. Since a detailed financial statement is not easy reading, this report has been broken down into the essential divisions necessary to show the sources of income and the channels of distribution. A study of the report gives a good picture of the activities of the different committees of the Society, although the grouping of several committees under the heading of "other committees" does not show clearly how active the Fracture Committee, the Woman's Auxiliary, the Committee on Medical Preparedness and the Committee on Child Health and Protection have been, since their expenses are covered by this general heading.

The books and accounts of the Society have been audited by a certified public accountant, and his detailed report is on file with Dr. Lee R. Woodward at Mason City and Dr. O. J. Fay at Des Moines, while the original copy of the audit is kept in the central office. These copies are open to inspection by any member of the Society at any time during office hours, and should there be any question about income or expenditures, the trustees, the treasurer or the central office staff will be glad to try to answer it.

The financial statement of the Society is as follows:

INCOME AND EXPENSE ACCOUNT
INCOME

Annual Session	\$ 2,990.00
Dues	22,415.00
Interest on Savings.....	83.19
Interest on Bonds.....	1,217.81
Journal—	
Advertising	6,759.13
Reprints	1,074.01
Speakers Bureau—Fees	2,211.00
Miscellaneous	127.86
TOTAL INCOME	\$36,878.00

EXPENDITURES

Administrative Miscellaneous	\$ 868.24
Annual Session	2,873.12
Bank Charges	2.98
Council	914.78
County Society Services.....	53.02
General Salaries	5,023.90
Journal—	
Salaries	\$3,077.30
Printing and Engraving.....	7,840.78
Reprints	950.86
Legislative Committee	11,868.94
Medical Economics Committee.....	4,500.00
Medicolegal Committee	236.24
Other Committees.....	585.50
Rent and Office Supplies.....	834.78
Speakers Bureau—	
Office Supplies, etc.....	\$ 572.57
Postgraduate Courses	1,830.82
Radio Programs	501.02
Salaries	1,605.90
Travel Expense	431.24
Stationery and Printing.....	4,941.55
Trustees	219.64

TOTAL EXPENDITURES	\$35,479.81
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EXCESS INCOME OVER

EXPENDITURES	\$ 1,398.19
Investments and total funds are shown in the following analysis and summary:	
Net Income for year 1941.....	\$ 1,398.19
Cash in Banks at beginning of year.....	4,470.50
Bonds on hand at beginning of year (cost) 47,491.09	

TOTAL FUNDS	\$53,359.78
Represented by:	
Cash in Bank:	
Bankers Trust Co. (Treasurer's Account)\$ 285.57	
Bankers Trust Co. (Secretary's Account)..... 299.53	
Bankers Trust Co. (Savings Account) 4,283.59	\$4,868.69

Treasury Bonds:	
2% due 3-15-50 (Par value)	\$25,500.00
2½% due 12-15-53 (Par value)	5,000.00
2¾ % due 6-15-54 (Par value)	5,000.00
3% due 9-15-55 (Par value)	9,000.00
Less discount on purchase of bonds	8.91
U. S. Savings Bonds (Maturity value \$4,000.00)	3,000.00
U. S. Defense Bonds due December, 1953, 2½% Series G.....	1,000.00
TOTAL CASH AND BONDS (as above)	\$53,359.78

Harold J. McCoy, Treasurer

REPORT OF THE BOARD OF TRUSTEES

To the Members of the House of Delegates of the Iowa State Medical Society:

During the past year the Board of Trustees met in January, February, March, June and December. In addition to these meetings, the Board discussed various items of business and policies by letter and telephone. One of our members, Colonel John I. Marker, has been in active service during the past year. He is Chief of Medical Service at the Station Hospital at Fort Leonard Wood in Missouri. Our meetings were accordingly held on days when it was most convenient for Colonel Marker to attend; he was present at all meetings and has kept in close touch with all the activities of the Society and especially of the Board of Trustees.

Lieutenant Commander Harold J. McCoy, Treasurer of the Society, was called into active service with the navy, December 15, 1941, and at present is stationed at San Diego, California. Because of his indefinite absence from the state, and since the signature of the treasurer is necessary in handling the finances of the Society, he elected to resign. The following correspondence, we feel, should be incorporated in this report:

December 15, 1941.

Earl B. Bush, M.D., President
Iowa State Medical Society
505 Bankers Trust Building
Des Moines, Iowa.

Dear Mr. Bush:

Because of the fact that I have been called into military service and am leaving Des Moines tomorrow to report at San Diego, I hereby offer you my resignation as treasurer of the Iowa State Medical Society. I am sorry to have to take this action because I have enjoyed the association very much, but the present emergency makes it imperative.

Very sincerely,
Harold J. McCoy, M.D.,
Treasurer

December 16, 1941.

Harold J. McCoy, M.D.
Bankers Trust Building
Des Moines, Iowa

Dear Dr. McCoy:

It is with very real regret that I accept your resignation as treasurer of the Iowa State Medical Society. You have served faithfully and well in this position for many years, and we of the State Society are indebted to you for your efforts. We also appreciate the many other ways in which you have been of help to the work of the Society, and we are going to miss you while you are gone.

I have notified the Board of Trustees of the vacancy and have asked them to appoint someone to serve as treasurer at once.

My best wishes go with you as you leave to take up service with our country's forces. You are making a great sacrifice but it is in a cause for which all of us would gladly serve to the best of our capacity.

Very sincerely yours,
Earl B. Bush, M.D.,
President

December 16, 1941.

Oliver J. Fay, M.D., Chairman
Board of Trustees
Iowa State Medical Society
Des Moines, Iowa

Dear Dr. Fay:

I am just in receipt of a letter of resignation from Dr. Harold J. McCoy, treasurer of the State Medical Society. Dr. McCoy is leaving Des Moines tomorrow to report at San Diego, and I am notifying you so that the Board of Trustees may appoint someone to act as treasurer in his place. This should be done without delay.

With best regards, I am

Sincerely yours,
Earl B. Bush, M.D.,
President

December 17, 1941.

James A. Downing, M.D.,
Bankers Trust Bldg.,
Des Moines, Iowa.

Dear Dr. Downing:

The Board of Trustees of the Iowa State Medical Society has just been notified by Dr. Earl B. Bush, president, that Dr. Harold J. McCoy has resigned as treasurer because he has been called into service. Dr. Bush asked us to appoint someone to act as treasurer at once, and so, by virtue of the authority vested in us, we have met and appointed you to this position to fill out Dr. McCoy's unexpired term. We know that you will be glad to do this because of your friendship for Dr. McCoy, and we know, too, that you will perform the duties of the office in the same thorough manner in which you perform the many other requests the State Society has made of you.

Sincerely yours,
Oliver J. Fay, M.D.,
Chairman Board of Trustees

The Board of Trustees elected Dr. James A. Downing Treasurer to serve until the next meeting of the House of Delegates. His bond was approved by the Board of Trustees.

The gross income of the Society for 1941 was \$36,878.00.

Income from dues was \$22,415.00.

Income from interest on bonds was \$1,301.00.

Income from other sources such as advertising, reprints, annual session, Speakers Bureau, etc., was \$13,162.00.

Expenditures were \$35,479.18, or \$13,064.81 more than dues.

The Board of Trustees at a meeting early in the year voted to waive the dues of members now in active service when their county societies had done likewise. During 1941, dues were waived for 65 members. Certainly many more doctors will go into service during this and future years; a fair estimate would probably be 400 or 500 men. Thus the Society's income from dues will be decreased four or five thousand dollars each year because of members in military service. The Board of Trustees recommends that the dues for 1943 remain as now at \$10.00. However, the Board feels that it must scrutinize sharply all expenditures of the Society's funds. There can be no curtailment of the essential activities of the Society, nor of the work of the medical preparedness program, all of which has

enormously increased the work of the central office. The personnel of the office has carried this extra load with little or no additional help. This office is splendidly organized and doing excellent work.

All expenditures, except routine, must be authorized by the Board of Trustees before the expenditure is made. The Board feels that officers and committee chairmen should attend only such meetings as are of especial importance and such expenses should be authorized in advance. With this we know that all of the members will concur.

Section 5, Chapter 6, of the By-Laws directs that the Board of Trustees shall have the accounts of the Society audited annually. The complete audit is made up in triplicate: one copy is retained by each member of the Board of Trustees. However, the original copy of this audit is filed in the office of the Iowa State Medical Society where it can be examined by any member who desires to do so. It is not published in full in the Journal because of the great expense involved, but the Board urges the members to examine it either in the offices of the Trustees or at the central office.

Board of Trustees
Oliver J. Fay, Chairman
John I. Marker
Lee R. Woodward

REPORT OF THE CHAIRMAN OF THE COUNCIL

The Council has only had one called meeting since the annual meeting last May; all business has been transacted through correspondence in the interim. This was purposely done in order to cut down expenses because many members have been called to military service and their dues have been waived. If the emergency continues the State Society funds will be materially reduced.

The following Committees of the Council have been very active the past year: the Speakers Bureau Committee, the Cancer Committee, the Tuberculosis Committee, and the Committee on Industrial Health. I refer you to their reports elsewhere in the handbook.

James E. Reeder, Chairman of the Council

REPORT OF THE FIRST COUNCILOR DISTRICT

After reviewing the reports I have received from the deputy councilors of this district I find the majority of the counties are active in sponsoring the tuberculosis program in their county and are making plans for taking an x-ray picture of all school children of high school age.

Dr. B. A. Hall, secretary of the Fayette County Medical Society, suggests that this might be an opportune time to ask for some legislation that will permit easier collections, making it possible to send legal papers by mail and so do away with the expensive services of a sheriff. Annulment of the statute of limitations on accounts might also be accomplished.

Dr. T. S. Walker, Deputy Councilor of Mitchell County, reports the death of Dr. F. W. Lee of Riceville and Osage, who had practiced for over fifty years.

Many counties report splendid immunization programs. Aside from this, national defense and medical preparedness seem to be the most important activities of the counties in the first district. Judging by the present outlook, these activities will warrant all the hard work and earnest energy we can put on them.

L. L. Carr, Councilor

REPORT OF THE SECOND COUNCILOR DISTRICT

Conditions in the second councilor district seem to be normal and to all appearances are running smoothly. The component county societies have cooperated in the diphtheria and smallpox immunization program, and have taken an active part in the program of the Women's Field Army for the education of the public in cancer. Reports from the deputy councilors do not show the existence of any serious problems. Apparently medical care of the indigent has been carried on satisfactorily for all parties concerned.

No postgraduate courses were given in the district during the year. One large meeting on poliomyelitis and encephalitis held at Garner, was very well attended by the doctors of the entire district. It was conducted by members of the faculty at the State University.

Membership remains practically unchanged. Some members have been called into military service; some have moved; and some new physicians have located in the district. The secretary's report will give definite figures on this.

C. H. Cretzmeyer, Councilor

REPORT OF THE THIRD COUNCILOR DISTRICT

A resumé of the reports sent to me by the several deputy councilors of the third district convinces me that organized medicine is on a high plane and moving along smoothly in this district. Many of the counties are in the 100 per cent membership class and practically all of them have participated in the various activities outlined by the state committees such as the vaccination program for smallpox, the diphtheria immunization program, the tuberculosis case-finding effort, the examination of 4-H Club boys and girls, and the cancer educational drive of the Women's Field Army. In addition, all of the county societies in this district have entered wholeheartedly into the war effort by giving freely of their time and services as members of draft boards and by aiding in every way the Procurement and Assignment Service of the American Medical Association.

Lyon County was threatened with a serious shortage of practitioners early in the summer due to the fact that within a short space of time two of the doctors at Little Rock left the county to practice elsewhere. Dr. DeYoung of George was disabled by a serious illness, and two of the men from Rock Rapids were called to army duty. Since that time, however, three physicians have moved into the county and so have relieved the situation in a meas-

ure, although the deputy councilor from that county informs me they still lack enough physicians to care for the load. There has been no complaint of this nature from any other county in the district.

Early in September, we staged a symposium on infantile paralysis at Gull Point State Park near Arnolds Park, under the auspices of the Committee for the Control of Anterior Poliomyelitis. This meeting proved instructive and was well attended by representative physicians from every county in the district.

Dickinson County sponsored a postgraduate course this year, holding monthly meetings at Spirit Lake. This course ran through the summer and late into the fall and was largely attended by the physicians of the adjoining counties. It was highly successful. The Dickinson County Society also was host to the summer meeting of the Upper Des Moines Medical Society held at Templar Park in July. O'Brien County was host to the winter meeting of the Northwest Iowa Medical Society held at Sheldon in December, and Sheldon also entertained a "school of instruction" for draft board members of this district in August. Emmet County arranged the winter meeting of the Upper Des Moines Medical Society which was held in Estherville in January.

Two fifty-year practitioners were honored in my district this year, Dr. F. J. Smith of Milford and Dr. W. W. Beam of Rolfe. In both instances, testimonial dinners were given by their respective county societies and fifty-year certificates presented with appropriate ceremonies. For over fifty years, Dr. Smith has been a practitioner of the art and a teacher of the science of medicine in the state of Iowa. Dr. Beam has practiced the art of medicine in Pocahontas County for many, many years and is a former councilor from this district.

I want to take this opportunity to thank the deputy councilors and the members of the constituent county societies of this district for the fine cooperation they have given me and the many courtesies they have shown me, thus making it a real pleasure to have served as their councilor during the year that has passed.

J. B. Knipe, Councilor

REPORT OF THE FOURTH COUNCILOR DISTRICT

From all reports the fourth district has been functioning practically normally. The Women's Field Army has been expanding; five counties are now organized. The Woodbury County Medical Society held several meetings during the year with out-of-state guests, and in addition had a very excellent attendance at the industrial health meeting. Up to the present, nine per cent of the medical profession of Woodbury County has been called to active military service. The physician population of the county is approximately fifty per cent of that of the district, and the percentage in service compares favorably with the percentage in other parts of the nation.

James E. Reeder, Councilor

REPORT OF THE FIFTH COUNCILOR DISTRICT

Medical activities throughout the fifth councilor district have been about the same during the past year as in previous years. There have been the usual smallpox and diphtheria immunization programs and in some of the counties there have been post-graduate courses of lectures. These have been well attended and appear to be the courses of instruction suited for men of the communities. Most of the counties had regular meetings throughout the year which were well attended.

Hamilton County has been working very hard to get its county hospital standardized and is meeting the requirements satisfactorily. Four doctors in the county have gone to the army. Guthrie County lost two members by death. Dallas County was particularly active in 4-H Club projects and has also set up a tuberculosis organization that should become very effective.

We are unable, in this district, to get the cancer committees organized and this apparently appears to be the bugbear of our entire activities. I feel that the past year has, however, been quite successful in a professional way in the entire fifth councilor district.

E. F. Beeh, Councilor

REPORT OF THE SIXTH COUNCILOR DISTRICT

During the past year, medical preparedness has been one of the chief problems of interest in this as in other sections of the state. We have lost some of our doctors who have joined the armed forces, and those who remain at home are carrying heavier burdens.

There appeared to be many excellent meetings held during 1941 in various parts of the district. Of special note were joint postgraduate courses held in Marshall and Tama, and in Jasper and Poweshiek Counties. In addition the district had a special institute on industrial health, one on poliomyelitis, as well as special meetings provided by the Speakers Bureau, the State Department of Health, the State Service for Crippled Children, and the staff members of the Veterans' Hospital. Interesting regular county programs, scientific recordings, and lay talks were reported in Black Hawk, Jasper, Hardin, Marshall, Grundy, Poweshiek and Tama Counties. These were well attended by physicians in counties less active in regular programs. In recent years there has been a tendency to hold joint county meetings in the sixth district as well as elsewhere in Iowa. The joint alternating meetings in Poweshiek and Jasper, and in Marshall and Tama Counties, have been noted by attending members, and the work of the Speakers Bureau in providing interesting programs has been especially commended. Counties of smaller population might profitably join both social and scientific activities in regular county meetings with adjoining counties of larger population regardless of district boundary lines, but they should not fail to retain their identity by a liberal placement of local talent on these programs. We should not become soft and lazy and allow others

to do the work while we do nothing but listen; we must carry our share of the load if we wish to avoid suffering our own little disasters. We cannot get something for nothing, and it is up to us to put our shoulder to the wheel in these critical times.

This brief general report covers conditions in the sixth district. Details of special activities may be found in the reports of the regular and special committees. At this time I wish to thank particularly the deputy councilors who have been of much assistance to me in my work as councilor.

"Remember Pearl Harbor", and also remember your local and professional "Pearl Harbors".

C. W. Ellyson, Councilor

REPORT OF THE SEVENTH COUNCILOR DISTRICT

Conditions in the seventh district remain very much the same as in the past, except that all physicians are busily employed in some form of defense work and that has of necessity interfered with some of the usual medical programs and society activities. It is pleasing to note that whatever task has been demanded of the medical profession has received its wholehearted support and response.

The membership has maintained its average growth and although several men have been inducted into the service, I find in all instances they have maintained their membership in their local county societies. In most instances their dues have been waived.

The tuberculosis program has been carried out in all the local counties, and the case-finding clinic responses have been very good, showing that the people realize the importance of this program where possible contacts have existed.

The response to the cancer program has not been very good throughout the entire district. In the counties where larger cities are located there has been good response and better results accordingly have been attained. The counties with smaller population have shown lack of organization and consequently have not obtained the desired results.

The inoculation and vaccination program has been fairly well carried out in the entire district.

The care of the indigent patients has been handled very well, especially in those counties where a satisfactory contract and fee bill have been arranged with the county supervisor. This seems to be more satisfactorily arranged in counties which have discarded the federal aid program and gone back to the original county care of indigents.

Since our time is so much taken up with the war and preparedness program I would like to suggest that each county society have more meetings and work out its individual problems as well as promote a feeling of good fellowship among its members.

H. A. Householder, Councilor

REPORT OF THE EIGHTH COUNCILOR DISTRICT

All of the nine counties in the district have kept up their usual activities despite the loss of a number of active men. Meetings have been held with the

same regularity, interest, and attendance. The report of the secretary will show the number which have 100 per cent membership. Active campaigns of immunization of children against diphtheria and smallpox have been carried on in the counties of Washington, Henry, Des Moines and Louisa.

A number of meetings have been held throughout the district by Lieutenant Colonel Shane to explain the work of the Selective Service boards. Members of the medical profession have willingly contributed their time to make the necessary examinations for the boards.

A large influx of workers at the ordnance plant in Burlington is seriously taxing hospital facilities in the southeastern part of the state. There have been a considerable number of doctors from this district who have entered federal service; there have been a number of deaths; and as far as my information goes there have been very few new doctors, which means that the older men will have to keep up their activities and probably increase them.

All in all the medical profession continues to fulfill its mission in the care of the sick.

C. A. Boice, Councilor

REPORT OF THE NINTH COUNCILOR DISTRICT

The secretary has been asked to report on conditions in the ninth councilor district in 1941. The district had four counties in which membership was one hundred per cent; they were Davis, Lucas, Mahaska and Wayne. One postgraduate course was held at Ottumwa, with an attendance of ninety physicians. Most of the counties held regular meetings and activities went on much as usual, although many physicians gave much time to selective service examinations. The district lost relatively few doctors because of the war, but almost every physician contributed in some way to the war effort at home. Marion County entered into its third year of medical service for FSA clients.

Robert L. Parker, Secretary

REPORT OF THE TENTH COUNCILOR DISTRICT

A summation of reports submitted by the deputy councilors of the various county societies expresses continuous interest and activity. Participation in immunization programs for smallpox and diphtheria has been general, also tuberculosis case-finding clinics have been held in some counties. Activity in postgraduate work has been lacking, although a majority of the counties report monthly meetings and the remaining at least four during the year. A great many of the meetings have been featured by visiting physicians and an invitation to the surrounding county societies to attend.

At this time, I think we can forecast more than our share of 100 per cent counties in the tenth district. A report has not been made on the number of doctors from this district who have entered the service to date; however, all physicians have shown a willingness to cooperate in any way.

James G. Macrae, Councilor

REPORT OF THE ELEVENTH COUNCILOR DISTRICT

The various component societies of this councilor district report they have carried on their usual activities throughout the year. All have held their customary number of meetings. Most of their scientific programs were presented by members of their society except for an occasional outside speaker.

All societies report that their members have cooperated to the fullest extent in the selective service work and that all are participating in the civilian defense program. Some of the counties have the medical portion of their civilian defense program well organized and others are in the process of organization. The district as a whole attempted to cooperate in all programs of the Iowa State Medical Society.

All the counties are participating in various relief programs similar to those carried on the last few years. One county, Harrison, is endeavoring to establish a new contract for medical relief. Most counties have carried on some form of an immunization program during the year. However, in two counties, there has been some difficulty over the immunization program instituted by the district health organization which embraces most of the counties in this councilor district. We hope the difficulty has been through a misunderstanding and that we will be able to iron out the situation without too much friction. However, to date this has not as yet been accomplished. The difficulty has arisen from the fact that attempts have been made to institute an immunization program without first submitting the proposed program to the county society for its approval or rejection. The councilor, after investigation, is not able to say why this should occur but hopes to be able to determine the answer before the state meeting. About the time we think the situation is ironed out in one county, it arises in another county. This is mentioned because the councilor feels there should be a better understanding and closer relationship between those in charge of the state's public health program and the State Medical Society.

Most of the counties have cooperated in the NYA project. Since the completion of that project one of the county societies feels that before another such project is accepted by the State Society, more care should be exercised to see that all politics are removed from it.

From one county, Page, comes the suggestion that the State Society should endeavor to do all it can to eliminate the deluge of remedy frauds advertised over the radios and in newspapers. It cites that many of these advertisements appear over the names of firms operated by registered pharmacists throughout the territory, and feels we owe it to the public to lend our efforts to stopping such procedures.

There was one councilor district meeting held during the year, at Council Bluffs on February 12, 1942. The program was devoted entirely to medical preparedness. There were 45 members of the State Society in attendance and six counties of the nine

were represented. The meeting was addressed by Dr. Earl B. Bush, president of the Iowa State Medical Society, Dr. Thomas F. Suchomel, Chairman of the Medical Preparedness Committee of the society, Commander John Freymann, Senior Medical Officer of the Omaha District, and General M. A. Tinley of Council Bluffs. This was one of the most informative meetings ever held in this district and received an enthusiastic reception from those present, all of whom felt well repaid for the time spent at the meeting.

I wish to commend the physicians who have served in the various counties as deputy councilors for their splendid service and excellent cooperation through the year. They are as follows: Dr. Jack V. Treynor of Pottawattamie County, Dr. R. L. Barnett of Cass County, Dr. W. H. Maloy of Page County, Dr. A. C. Bergstrom of Harrison County, Dr. Ralph Lovelady of Fremont County, Dr. W. S. Reiley of Montgomery County, Dr. D. W. Harman of Mills County, Dr. A. L. Nielsen of Shelby County, and Dr. L. E. Jensen of Audubon County.

In conclusion, it is my opinion we have enjoyed a very successful year throughout the entire district.

M. C. Hennessy, Councilor

REPORT OF DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

The ninety-second annual session of the House of Delegates of the American Medical Association convened at ten a. m., Monday, June 2, 1941, at the Hotel Statler in Cleveland. The meeting was called to order by the Speaker, Dr. H. H. Shoulders, and the report of the Reference Committee on Credentials showed that one hundred fifty-two delegates with proper credentials had registered.

First order of business was the election of a physician to receive the Distinguished Service Award. From an original list of five names submitted by the committee, three were selected by the Board of Trustees and presented to the House of Delegates. They were Dr. James Ewing of New York, Dr. Simon Flexner of New York and Dr. Ludvig Hektoen of Chicago. Dr. Ewing received a majority of the votes cast and so was chosen to receive the 1941 award.

Dr. H. H. Shoulders, Speaker of the House, gave the first address. He drew a striking contrast between the work of a representative in the national Congress and the doctors who comprise the House of Delegates of the American Medical Association. The political and economic interests of the Congressman's constituents are uppermost in his mind, and too often his effectiveness as a representative is measured by the number and the amount of appropriations he obtains for projects in his district. On the other hand, the members of the House of Delegates represent no such interest; they make no such appropriations. Instead they represent the idea and the ideals of the medical profession with regard to medicine, not the selfish pecuniary interest of individual doctors. The House of Dele-

gates represents the science and art of medicine as an agency for human welfare, but it does not claim to represent the owners of the science of medicine. The Speaker concluded his talk by venturing the opinion that the profession of medicine throughout the world is placing an increasing faith in and reliance on the American Medical Association for leadership in the solution of problems requiring medical statesmanship.

"The American Medical Association has attained the dignity of age as it has grown from a small group of founders in 1846 to its present stature of one hundred and eighteen thousand members." Thus did President Nathan B. Van Etten open his address to the House of Delegates. Dr. Van Etten showed the progress of the medical profession from 1846 by pointing out the triumphs of optimism, the evolution of science, and the insistence on the highest possible qualification for the doctor of medicine; and he expressed his wonder whether the century ahead could be as remarkable as the century just past.

Speaking in defense of attacks made on the policies of the American Medical Association Dr. Van Etten declared that the Association desires for the American people only the best service for their best interests, and their protection from any form of quackery which would exploit them when they are sick; it favors public health measures under proper auspices which can be used to keep persons well and prevent infection regardless of race, creed, class or financial competence. Reporting on the work of the Committee on Medical Preparedness, which was instituted a year ago in answer to a governmental request for help in the mobilization of medical personnel for national defense, Dr. Van Etten revealed that 95 per cent of American physicians are willing to support the military services of the United States when and where they may be needed. This record of patriotic expression denies the claims of discord within the ranks of medicine which have been made by those who have openly declared that our entire social structure must be leveled and rebuilt after the communistic manner.

The address of President-Elect Frank H. Lahey was concerned with calling to mind the things that had occurred to him while in the position of president-elect. Dr. Lahey complimented the American Medical Association and other branches of medicine for their widening development of unselfish cooperation in the interests of better medicine now and for the future.

The Board of Trustees reported that the gross income from all sources for the year 1940 was \$1,876,-353.80. Income received from Fellowship dues and subscriptions was \$776,202.44. The number of persons employed by the Association at the time of preparation of the report was six hundred thirty-six. Net income for the year as shown in the report of the auditor was \$187,768.30, of which \$80,571.91 represented interest on investments.

The Board also reported the activities of the many departments of the Association which are under its

supervision. A summary of these reports will be found in the following pages.

The Journal has continued to occupy its recognized high place as a leader in the field of medical journalism. Changes made in the composition of the Journal in 1940 have resulted in improvement. The section devoted to medical preparedness has been of great service in furthering cooperation and co-ordination among those interested in medical preparedness. The presentation of modern medical technics by means of special series of articles devoted to various subjects has been exceedingly valuable to great numbers of physicians. The European war has interfered seriously with the receipt of foreign letters and periodicals, and an attempt is now being made to secure more frequent contributions from South American centers. The net paid weekly average circulation of the Journal in 1940 was 98,002. The special journals published by the Association have continued to follow the high scientific and editorial standards previously established. Special issues of the Archives of Surgery, the Archives of Pathology and the Archives of Ophthalmology were published during the year, and the number of pages in these and others of the special periodicals was considerably increased. There was a gratifying increase in the number of subscribers to each of the special journals.

The Library of the American Medical Association maintains a package library service, a periodical lending service and an employees lending library, records all books received and reviewed for THE Journal, provides a general reference service, prepares and edits the index for the Journal and prepares material for the Quarterly Cumulative Index Medicus. The war in Europe affected somewhat the Quarterly Cumulative Index Medicus, which is prepared for publication in the Library. Many foreign periodicals, chiefly French and Italian, have not been received; the size of foreign journals has been reduced; and for a period of several months during the year no journals were received from Germany, so that there was a notable decrease in the number of articles indexed from foreign periodicals.

From an editorial point of view Hygeia continues to hold its usual high place, and its circulation has been well maintained. Many Hygeia articles have been selected for re-publication in such periodicals as the Reader's Digest, and the magazine is used in many schools as a reference work and guide for students. Reprints from this publication are widely circulated by the Bureau of Health Education. The average monthly net paid circulation of Hygeia during 1940 was practically the same as in 1939, but there was an increase in the amount of advertising. The total income in 1940 was larger than in the preceding year by the sum of \$18,393.23.

During the year the Council on Pharmacy and Chemistry has continued to give consideration to questions of timely therapeutic importance. Reports have been published on various questions dealing with chemotherapeutic agents, vitamins and hormones.

Among the important reports issued by the Council have been discussions of the massive dose intravenous drip method in the treatment of syphilis, a review of the status of therapy with snake venoms, and the evaluation of products such as chorionic gonadotropin, desoxycorticosterone and Vitamin E. Informative reviews have been published on the promiscuous use of barbiturates and bromides, the use of histaminase in allergic conditions, the problem of lipid pneumonia and the therapeutic value of oxygen-carbon dioxide mixtures. Under the sponsorship of the Council, a new series of articles on the endocrines was planned and publication in the Journal has begun. When completed, it is planned to publish this series in book form as a new edition of *Glandular Physiology and Therapy*.

The name of the Council of Foods was changed by authority of the Board of Trustees to Council on Foods and Nutrition in recognition of the direction which the work of the Council is taking. While attention is being directed to broad nutritional problems, the Council continues to give consideration to individual food products. The scope of the Council's work gradually is being revised to permit emphasis on items which present special problems, such as foods intended for the feeding of infants, products for feeding the sick and preparations for special dietary purposes. Among the problems given consideration by the Council have been the effect of quick freezing on the nutritive value of foods, suitable tolerances for toxic spray residues on certain foods and the proper amount of iodine in iodized salt. A number of reports of the Council have been published in the Journal, and each month an article on foods or nutrition has been published in *Hygeia*.

The Council on Physical Therapy has investigated and issued reports on physical therapy apparatus and methods, has encouraged research and has carried on an effective program of education. Members of the Council are serving on the Subcommittee on Physical Therapy of the National Research Council in connection with the development of the national defense program. A tentative list of requirements for electrocardiographs is being prepared, and the investigation of roentgen ray problems has progressed. The Council's program of education included lectures, exhibits, addresses and the writing of thirteen informative articles by Council members and the consultants on education. The operation of efficient physical therapy departments in hospitals and the increasing number of courses in physical therapy given in medical schools are gratifying to the Council.

Much of the activity of the Council on Industrial Health during 1940 has been directed toward the adjustment of its original program to the requirements for national defense. As a direct means of accomplishing the essential details of industrial medical preparedness, added stress has been placed on the Council's educational program through the Congress on Industrial Health. Field work continues to be regarded as essential to successful state and county relationships, without which the work of edu-

cation and elevation of industrial medical standards would be seriously hampered. All cooperating committees have been notified about the need for greater medical participation in the administration of workmen's compensation and for better integration between compensation boards, vocational rehabilitation services and the medical profession.

The Bureau of Legal Medicine and Legislation reported on federal and state legislation as it touched the field of medicine. No measure of primary medical importance was enacted by the Seventy-sixth Congress between the last meeting of the House of Delegates and the expiration of the Congress. Statements emanating from official governmental sources forecast legislation of medical import that will require careful consideration. Federal participation, financial and otherwise, in plans for the control of industrial diseases, tuberculosis, cancer and dental diseases is proposed by bills pending in Congress. The establishment of a National Physical Fitness Institute in the Federal Security Agency and the enactment of a National Preparedness Act of 1941 for the improvement of physical and social fitness are contemplated in other bills. Still other bills provide for the appointment of female dietitians and female physical therapy aides in the Army and for the creation of a Chiropody Corps in the Medical Corps of the Army. A pending proposal would make illegal any operation or experiment performed on a living dog in the District of Columbia for any purpose other than the healing or curing of the dog.

State legislation from New Jersey, Virginia, Washington, Kentucky, Mississippi and Rhode Island was also reported upon by this Council.

The organization of prepayment plans for medical care continued to occupy a prominent place in the work of the Bureau of Medical Economics during 1940. At the request and with the support of the National Foundation for Infantile Paralysis, the Bureau early in the year undertook a survey of all funds now available in the United States for the care of the crippled. A study of group medical practice which actually was a recheck and extension of a similar study made in 1933 was undertaken in 1940 in order to learn, if possible, the rate of growth and mortality, and the changes, if any, in locations, sizes, equipment, number and type of specialists as well as other characteristics of medical groups. Although the American Medical Association and its constituent societies have been charged with opposition to group practice, a search of the Proceedings of the House of Delegates of the American Medical Association for thirty-two years failed to show any action that indicated the slightest hostility to the formation of ethical medical groups.

The Bureau of Investigation has maintained its work, which was first instituted in 1906, by supplying information to the profession and to the public through correspondence, by addresses by the Director, and by providing slides and film strips for the use of physicians and educators in their contacts with the public. The work of preparing material for publication in the Journal increased during 1940, and

the relationships of the Bureau with various official agencies of the Federal government have been augmented.

The Scientific Exhibit at the New York session included two hundred and forty-five exhibits and three groups of motion pictures. There were special exhibits on fractures, lame backs and fresh pathologic material, and exhibit symposiums on heart disease and anesthesia. Association exhibits, dealing with the activities of the Association, numbered forty-six. They were shown one hundred forty-one times in twenty-seven states.

In accordance with the action of the Board of Trustees, the Advisory Committee on Advertising of Cosmetics and Soaps during the year discontinued the consideration of individual cosmetics and instituted the preparation of general reports on cosmetic preparations for publication in the Journal as the reports of the Committee on Cosmetics. The secretary continued in the same capacity for the Committee on Cosmetics and directed consultation with authorities in this field regarding new cosmetic products which were presented for advertising in the publications of the American Medical Association.

The reports of the various officers and committees were referred to the reference committees appointed to deal with them, and new business was then introduced. The most important items of new business were probably the following: a re-valuation of the relationship of medicine and law; a proposal to establish health exhibits in cities which are to be host to the annual session; a more careful and detailed study of the specialty boards and their methods of procedure; the place women physicians are to

occupy in time of war or preparedness for war; and the advisability of creating a new section devoted to general practice. Dr. Irvin Abell gave a very comprehensive report of the year's work of the Medical Preparedness Committee, and there was also a complete report on legislative activities, particularly with reference to the government's suit against the American Medical Association. The House voted that the decision against the Association should be appealed to the Supreme Court. It was also decided to make the 1942 session at Atlantic City a Pan-American session to which all of our neighbors in the western hemisphere would be invited to send representatives. Medical education with all of its problems was very thoroughly studied; and FSA medical plans and allied problems were also considered.

The delegates showed themselves fully aware of the magnitude of the task facing the medical profession in the unsettled state of the nation, and once more placed themselves on record as standing prepared to meet the needs of the government for physicians in service and governmental agencies as well as to carry on in safeguarding the health of the civilian population. The thought of everyone present at all of the sessions seemed to be to make available to the government the resources of the American Medical Association while at the same time maintaining the same high standards of medical education and practice.

Dr. Fred Rankin of Lexington, Kentucky, was named president-elect, and St. Louis was chosen for the 1944 meeting place.

Thomas F. Thornton
Arthur D. Woods
Ransom D. Bernard

Reports of Standing Committees

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

Your Committee on Constitution and By-Laws met in February to make its final decision about the life membership problem, after studying carefully the recommendation submitted by the Life Membership Committee last May which was approved by that House of Delegates. Our recommendation is not so strict as that of the Life Membership Committee, but we believe it is equitable.

By unanimous action of the Committee we offer the following: Article IV, Sec. 2, of the Constitution is hereby repealed and in its place the following ruling shall be enacted:

"Sec. 2. Any member of the Society who has practiced medicine for fifty years and has been a member of the Society for thirty years, or any other member of the Society who is incapacitated to such an extent that the payment of dues would work a hardship upon him, may, by affirmative vote of his county medical society, be presented as an applicant for life membership in the State Society. The House of Delegates of the State Society shall be the official body to

pass upon such applications, and a two-thirds vote shall be necessary for the conferring of life membership."

Your Committee asks the passage of this amendment.

John H. Henkin, Chairman
Bush Houston
William L. Alcorn

REPORT OF THE COMMITTEE ON FINANCE

The Committee on Finance reports to the House of Delegates that it has examined the books of the State Society and found them in order. The audit as prepared by W. Widdup and Company was checked against the orders and checks and was found to be correct in all details.

The Committee believes the policy of waiving dues for men in service is correct in spite of the fact that it will mean a decreased income. The reserves of the Society are strong enough to carry this burden, and the Committee feels the use of the surplus in such a way is most appropriate.

E. C. McClure, Chairman
A. S. Bowers
H. A. Tolliver

REPORT OF THE MEDICAL ECONOMICS COMMITTEE

Collection Agencies. No new agencies were given cards of approval during 1941. After discussing the applications of several collection agencies which were national in scope, the Committee adopted a standing policy that it would not give approval to any collection agency of a national type. This decision was considered a wise move because it is impossible to deal satisfactorily with organizations whose home offices are out of the state.

FSA Medical Care Plan. This plan has been in operation in three counties during the year, with a reasonable degree of success. With the experience gained in several other states, the FSA has revised the plan and its administration somewhat. The new set-up is now being considered by the committee, but at this time no decision has been reached. Participation has been left entirely to the individual counties without either approval or disapproval by the committee. It has been felt that some provision should be made whereby the FSA would accept some additional responsibility in those counties where, due to epidemic or other unusual medical circumstances, the plan fell far short of being adequate. Such a plan is being considered in Wisconsin.

Hospital Service, Incorporated, of Iowa. This prepayment plan for hospital care has been progressing very well. It has over 42,000 individuals covered, has been paying hospital bills promptly, and has a satisfactory reserve fund to cover possible emergencies. Dr. N. Boyd Anderson of Des Moines, who was one of the medical members of the board of directors, found it necessary to resign when he was called into military service and his place has been satisfactorily filled by Dr. Donald H. Kast of Des Moines. There seems to have been a minimum of difficulty with the conduct of the affairs of the company. We are now commencing a study of the effect of hospital prepayment plans on the relations of patient and physician. These plans have over nine million persons enrolled in the United States and are enlarging at an increasingly rapid rate.

Medical Service Plans. The committee was directed by the House of Delegates to study these plans as they developed, and to prepare for organization of a prepayment plan for medical care in Iowa. The plans now in operation are being studied, their experiences are being watched, and material is being collected so that, if and when it becomes necessary, the Iowa State Medical Society will be able to direct and develop the best possible program with the least possible error and experimentation. On Saturday, February 14, 1942, a meeting of officers of medical service plans was held in Chicago, at which your Medical Economics Committee was represented. Much information was gained, and tentative plans were laid for organizing all of the material relevant to them under the direction of the American Medical Association.

Medical Care of Indigents. This question is still one of importance. At the meeting of the House of Delegates last year, our Committee reported that

a study was being made in the hope of developing some standard types of plans, and some general conformity as to rates and contracts for the care of indigents in the various counties. This matter stood still for some time, but after two or three conferences with representatives of the State Board of Social Welfare, active work is being undertaken. The material gathered last year has been studied further. From the seventy-seven counties responding, we have chosen fifteen with varying types of plans which gave varying degrees of satisfaction, and are making a very detailed study of their medical relief problem. More detailed questionnaires have gone out to these counties, each of which has agreed to give us all possible help in getting our material. The State Board of Social Welfare is starting to obtain certain information from the relief offices and the county officials in the same counties. In the near future we will send a representative to these counties to study some of the material which cannot be obtained by letter or questionnaire. This will take some time, but by the time new contracts are to be made for 1943, the study will be completed and information as to the findings will be in the hands of the county societies and the relief offices.

Although this committee has not been definitely directed to study the effect on medical care in the state of the entry of our professional men into military service, this problem has many economic aspects. More important than the economic aspects are the effects on the welfare of the people in the counties most affected, and the result which this may have on medical practice. It does not seem that this is within the province of this Committee, but since we have been asked about it on several occasions, with the thought that our committee might have something to do with the problem, we suggest that the House of Delegates consider this question seriously and take appropriate action.

Since the problem of prepayment plans for medical services is becoming a major one in many states, and since the meeting in Chicago showed that this movement needs definite direction by the medical profession, we would suggest that the Iowa State Medical Society, after careful consideration, instruct its delegates to the American Medical Association as to its opinion on this subject. If desired a resolution might be presented at the American Medical Association meeting in Atlantic City this year.

These problems of medical relief, hospital service plans, prepayment medical care plans, FSA plans and others are ones which it is the Medical Economics Committee's responsibility to study, but it is just as necessary that the members of the House of Delegates inform themselves of these matters and come to some definite conclusions about what stand we may take on them. We are ready to provide any material we have for the information and consideration of any or all members of the House of Delegates at any time.

Ernest E. Shaw, Chairman
Thomas F. Thornton
Harry M. Ivins
Charles T. Maxwell
Bernard B. Parker

REPORT OF THE COMMITTEE ON NECROLOGY

During the past year we have lost through death forty-seven of our colleagues. The youngest was thirty-six years of age; the oldest ninety-two. We shall miss them, their strength and their support, and we take this opportunity to stand a moment in silence as a memorial to them while their names are read.

James E. Reeder, Chairman
James G. Macrae, Secretary

Name	Town	Age
Anderson, William E.	Washington	77
Aschenbrenner, Carl	Pella	75
Brown, Joseph	Des Moines	55
Budge, Ben G.	Ames	60
Burgess, Jonathan W. A.	Iowa Falls	72
Cronk, Clara L. K.	Bloomfield	79
Davies, James E.	Oxford Junction	68
Desmond, Thomas F.	Webster City	75
Donovan, Michael J.	Perry	70
Engle, Harry P.	Newton	68
Eslick, Louis E.	Rockwell City	73
Ficke, Emil O.	Davenport	61
Forsyth, Manley	Fremont	62
Hall, Harry P.	Atlantic	67
Hazard, Theodore L.	Iowa City	81
Henneger, William A.	Dubuque	54
Henry, Rex Vale	Hedrick	66
Hope, Frank G.	Sioux City	58
Houghton, Frederick W.	Council Bluffs	79
Howell, Chauncey W.	Grinnell	53
Huntoon, Gardner A.	Des Moines	66
Leahy, Paul E.	Sioux City	36
Lee, Frank W.	Osage	82
Madden, William D.	Clinton	64
Maloney, Arthur P.	Fonda	59
McColm, Charles W.	New Market	75
McMillan, Edwin C.	Hudson	63
Meythaler, Arthur J.	Earlville	64
Moore, Edwin Augustus	Harlan	68
Moore, Fred	Des Moines	57
Myers, Lynn L.	Sheldon	47
Naae, Thorlef T.	Graettinger	79
Padgham, James B.	Ocheyedan	58
Rohlf, William A.	Waverly	74
Russell, Charles R.	Keosauqua	70
Ryan, George C.	Maquoketa	46
Simeral, Fred E.	Brooklyn	62
Smith, Edgar F.	Storm Lake	67
Stone, James G.	Bloomfield	58
Stone, Roy D.	Sully	55
Wagner, William C.	Traer	69
Walter, Augustus F.	Gladbrook	84
Willett, Harry C.	Des Moines	71
Wiltse, Edward W.	Modale	79
Woodbridge, Ward	Central City	92
Wright, Howard J.	Des Moines	70
Wright, Jane D. M.	Clear Lake	73

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Since there has been no session of the General Assembly of Iowa since our last meeting, your Committee has no report regarding proposed or pending legislation within the state. You will recall that the Forty-ninth General Assembly enacted the premarital law but action on a compulsory vaccination bill and one requiring a blood examination to determine intoxication failed to materialize.

Your Committee wishes to report that two organizations which it has sponsored, Hospital Service Incorporated and the Iowa Interprofessional Association, are progressing satisfactorily. Hospital Service Incorporated now has forty-two thousand members and a substantial financial balance. The work of Director Fred Lattner is most commendable. The Iowa Veterinary Medical Association was host to the Iowa Interprofessional Association in January. A symposium on encephalitis-encephalomyelitis was presented. L. L. Eisentraut, president of the Iowa Interprofessional Association, presided. Dr. H. W. Jakeman, president of the American Veterinary Medical Association, spoke on interprofessional relations. J. P. Leake, M.D., United States Public Health Service, discussed encephalitis and Adolph Eichhorn, D.V.M., Director of the Animal Disease Station, Bureau of Animal Industry, discussed encephalomyelitis. The attendance was gratifying and the discussion spirited.

Legislative groups within other organizations and those being formed by combining several organizations to consider and possibly sponsor legislation of vital interest to this Society have been observed and checked by your Committee. We feel this phase of our activities is of paramount importance and should be given careful consideration by the House of Delegates.

Your Committee has been especially active in keeping our Iowa Congressional delegation informed of our reactions to proposed federal legislation. This has necessitated conferences with the Bureau of Legal Medicine and Legislation of the American Medical Association as well as with members of Congress itself. In spite of the rush of war legislation, the cults are taking advantage of the much publicized need for more doctors for adequate defense purposes, and are attempting by every possible legislative trick to gain recognition. It is regrettable that one of our senators has assumed sponsorship for some of this legislation.

This surge of social legislation embracing not only recognition of the cults but establishment of new hospitals and clinics is bound to be reflected in proposed legislation in the next General Assembly of Iowa. It is therefore of utmost importance that you use your influence, at once, in the selection of competent men in the primaries from your several districts. It must be borne in mind that the policy of this Committee during the next General Assembly will, to a large extent, be governed by the discussions and conclusions of the House of Delegates.

As a means of keeping abreast of developments having to do with the interest of the profession, your Committee was represented at two recent meetings in Chicago, one being the Conference on Medical Service Plans and the other the National Conference on Medical Service.

A more detailed report will be given from the floor of the House.

R. D. Bernard
L. A. Coffin
A. L. Jenks

Reports of Special Committees

REPORT OF THE COMMITTEE ON CHILD HEALTH AND PROTECTION

Members of the House of Delegates:

The first item of business we would like to have considered is that of the name of this committee. Although we are known as the Committee on Child Health and Protection, in reality we are a Committee on Maternal and Child Health; our membership is comprised of obstetricians and pediatricians; and our work is similar to that carried on in other states and in the nation by Committees on Maternal and Child Health. Therefore, we request permission from this House of Delegates to change the name of our committee to that on Maternal and Child Health.

Second, we beg to report we have been active during the year. Our annual immunization program, which was approved by this body last May at the Davenport session, was carried on in 69 counties during November, and many other counties are doing similar work although not in the same month as that of our campaign. As you know, this was a cooperative effort with the State Department of Health, the State Department furnishing the materials to designated pharmacists in each county. Diphtheria immunizations were given to 42,962 children, and 35,618 children were vaccinated against smallpox. Although these figures are smaller than those of our first campaign, we still feel the effort is decidedly worthwhile and recommend that the campaign be carried on again in 1942.

Your committee has considered the establishment of well child conferences and prenatal clinics where they do not exist, and has recommended that the film "When Bobby Goes to School" should be shown to county medical societies and then to lay groups in order to arouse interest in and knowledge of the benefits of the well child conferences. We have also approved of the distribution of charts on nutrition through the State Department of Health, realizing that this is a most important problem in wartime and that the public should be educated to the need for good nutrition for good health.

Harold E. Farnsworth, Chairman

REPORT OF THE FRACTURE COMMITTEE

The annual state fracture clinic was supplanted in 1941 by an all-day program presented in collaboration with the Central States Society of Industrial Medicine and Surgery on the day preceding the annual session of the State Society. The members of the committee arranged an x-ray exhibit showing many types of treatment of fractures. This was a part of the general scientific exhibit. Many county societies devoted one meeting of their program to consideration of fractures.

In 1942 the committee is instituting a program of panel discussions during the noon luncheon on the

second day of the annual meeting. It is hoped that these discussions will draw a large attendance and that they may be of value to the general practitioners in their treatment of fractures.

Donald C. Conzett, Chairman

REPORT OF HISTORICAL COMMITTEE

During the past year the committee secretary, Henry G. Langworthy, has been very active in securing additional medical histories of a number of counties, so that the list is gradually being completed. As soon as this has been accomplished it is expected to revise the first volume of the History of Medicine in Iowa published by the late Dr. D. S. Fairchild, and edit a second volume in order to complete the history of medicine in Iowa.

Walter L. Bierring, Chairman
Henry G. Langworthy, Secretary
Tom B. Throckmorton
R. T. Lenaghan
J. T. McClintock
Frank M. Fuller

REPORT OF THE MEDICAL LIBRARY COMMITTEE

Pieces of literature loaned.....	15,147
Pieces of literature consulted in library.....	16,155
	<hr/>
	31,302
Requests for literature.....	3,799
Patrons served in the library.....	2,640
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Bibliographies prepared	6,439
Letters written	1,850
Postal cards written.....	2,615
	<hr/>
Telephone calls	4,465
Accessioned volumes in library.....	1,170
Periodicals received by paid subscription..	25,823
Periodicals received by gift subscription	188
	82
	<hr/>
Reprints	270
Gifts to the library (books).....	28,919
Gifts to the library (journals).....	1,205
Gifts to the library (bulletins).....	25,899
Gifts to the library (transactions).....	1,379
Gifts to the library (proceedings)	243
Gifts to the library (reprints).....	285
	<hr/>
Gifts made to other libraries (journals)	1,316
Gifts made to other libraries (books)....	30,327
Gifts made to other libraries (reprints)	7,515
Gifts made to other libraries (proceedings)	768
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Borrowed from Surgeon General's Library for doctors	564
Borrowed from other libraries for doctors.....	38
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Jeannette Dean-Throckmorton, Medical Librarian	17

REPORT OF THE COMMITTEE ON MEDICAL PREPAREDNESS

Since the presentation of the last report of the Committee on Medical Preparedness of the Iowa State Medical Society, no definite directive has been received by it from higher sources. There have been two major activities with which your Committee has become very closely identified; namely, Procurement and Assignment Service and civilian defense.

Upon recommendation of the Committee on Medical Preparedness of the American Medical Association, the House of Delegates adopted a resolution calling upon federal authorities to establish a central agency which would be a clearing house for the procurement and assignment of medical, dental and veterinary personnel for the various armed services of the United States, and as a result the Procurement and Assignment Service was created by authority of President Franklin D. Roosevelt. The personnel of this service has appeared in other reports. Major Sam F. Seeley, Medical Corps, has been designated by the War Department to act as Executive Officer. The function of this service is primarily to assure a supply of medical, dental and veterinary personnel as above designated. All of these services will send requisitions to this service for personnel necessary for their efficient functioning. It is the hope of the powers that be that a sufficient number of members of the aforementioned professions will fill out the blank that appeared in the December 27, 1941 issue of the Journal of the American Medical Association and the January number of the Journal of the Iowa State Medical Society, and thereby place themselves on record as willing to accept service in the various branches of the government. Similar blanks have appeared in the journals of the other professions. If the response to this appeal will not produce the desired results, it is our opinion that necessary legislation will be introduced setting up draft machinery and thereby force our members and those of the other professions into service. We, your Committee, hope that the profession of Iowa will not be found wanting in this, our greatest national emergency.

It was our privilege to attend the Conference of State Secretaries and Editors at the American Medical Association in Chicago on November 14-15, 1941. Needless to say the trend of papers dealt with medical preparedness and civilian defense. Major Seeley gave a very comprehensive picture of the functioning of the Procurement and Assignment Service. General Hershey, Director of Selective Service, spoke on the problems of the draft. His talk was highlighted by the statement that rehabilitation of all Class 1B registrants will be attempted in order to bring as large a number of this group back into a 1A classification.

Next to Procurement and Assignment, civilian defense looms as a major function to be faced by the medical profession of Iowa. There are numerous areas in our state that are concerned with vital defense production. In addition to the large munitions plants at Burlington and Ankeny, many of our cities are producing articles vital to armament as

well as some very necessary food items. The State Industrial and Defense Commission, which admittedly was first formed with the view of obtaining defense industry for the State of Iowa, took over the job of supervision and guidance of civilian defense in Iowa with the advent of war. At first civilian defense in Iowa was a very loose organization, functioning and we may easily say floundering along without any specific direction from higher authority. All activity that was manifest was dependent upon meager information from the Office of Civilian Defense at Washington, D. C., and largely upon the individual initiative of county directors. We will now digress a little from the true purpose of this report and toot the horn of the home county of the Chairman of your Committee. From reports trickling in from various centers, it seems that Linn county has progressed farther in establishing its civilian defense set-up than any other county in the state. The medical personnel is just about complete at the writing of this report, and we are certain that when this report comes to public view our county will be 100 per cent organized. We have been receiving numerous communications, asking what shall be done, and how shall we do it? We will endeavor to present an outline as to what should be done.

A representative of the medical profession is absolutely essential on every county defense council. The medical member of the council, by virtue of his appointment, becomes Chief of Emergency Medical Services. His responsibilities are many and his should be purely an executive position. He should first of all appoint a Medical Advisory Council, the membership of which should not be limited to members of the medical profession but should consist of individuals who, by virtue of their vocations, are considered experts in various lines. The Chief is responsible for the establishment or designation of first aid stations in his county. This job he should do by himself. He should also see that the prescribed supplies for the manning of these stations are made available. His responsibility also is to see that adequate transportation of wounded to hospitals is provided. He is also responsible for proper nursing personnel, first aid workers and volunteer nurses' aides.

At a meeting in Des Moines in December, 1941, a State Medical Advisory Council was organized and Dr. Thomas A. Burcham of Des Moines was chosen as chairman. The main function of this council will be largely advisory. It will from time to time submit directives to assist county councils in setting up their respective organizations. It is hoped that in no way and at no time will this council act in a dictatorial manner, unless a situation develops where intervention is absolutely necessary to produce the desired results.

On January 2, 1942, we received a list of the various county chairmen on medical preparedness. We are very sorry to report that on that date there were fourteen county societies that had not named their chairmen. It is hoped that by the time of the annual session of the Iowa State Medical Society all will

have been named and we will be able to report a 100 per cent cooperation.

With the national situation what it is, it seems that the main obstacle standing in the way of a complete coordination of defense and preparedness activity is a general apathy and the feeling "it can't happen here". We must all, collectively and individually, strive to disperse that feeling. When the subject of civilian defense is mentioned, we are prone to think in terms of the east and west coasts. That means bombings. In my opinion bombing from the air should be the least of our worries. Our chief concern is and should be with sabotage. There is no doubt but what all possible means to cripple the production and delivery of vital defense products will be resorted to by those who are in the pay of our enemies. Let us of the medical profession keep our feet on the ground, not get overly excited, but at the same time keep our powder dry, plan, build and prepare for any emergency that can possibly overtake us.

Your Committee wishes to express its sincere appreciation for the cooperation extended to it by all of the committees and officers of the Iowa State Medical Society, and above all, we appreciate the cooperation of the profession itself. We are certain that we shall not be found wanting in the fulfillment of our task in this gigantic effort of national defense.

Thomas F. Suchomel, Chairman

REPORT OF THE COMMITTEE ON PNEUMONIA CONTROL

The Pneumonia Control Committee had a meeting in Waverly this fall. At that meeting the advisability of revising the handbook on the diagnosis and treatment of pneumonia was discussed but it was finally decided that this was not necessary. The various means by which the Committee might be of help from the standpoint of disseminating knowledge regarding the diagnosis and treatment of pneumonia to the profession was also discussed.

Fred M. Smith, Chairman

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

Your Committee as such has been inactive largely because new developments have made it unwise to burden the society with the expenditure of a meeting when the picture has changed so rapidly. Realizing that the members of the Committee were widely separated, your chairman has assumed responsibility for its policies.

On the many requests emanating from the lay public for advice and guidance, your chairman has endeavored to stress the fact that all doctors are working under pressure of the emergency. In line with this conviction we have tried to convince the public at large that there must be of necessity a spreading out of medical service to compensate for the large number of physicians that were called to military service. On the whole I believe your Committee has served the society usefully in its relationship with the people as a whole during the past year.

H. E. Stroy, Chairman

REPORT OF THE COMMITTEE ON SCIENTIFIC EXHIBITS

Seventeen scientific exhibits were displayed at the 1941 annual meeting, all of excellent quality. The booths provided for the exhibits were a great improvement over those used for the first time in 1940, and helped give a much better background for the showings. The room also was well lighted and spacious, and all of this contributed to the popularity of the section. So high was the quality of the exhibits that three awards were given instead of the one originally contemplated. The Committee was greatly pleased at the interest manifested in this section of the meeting and pledges its sincere effort toward maintaining the high standards set by those who prepared an exhibit.

The scientific film section again proved to be a very popular feature. Dr. Paul A. White of Davenport was in charge of procuring the films, and he assembled a very interesting collection, included in which were some British war films which attracted a great deal of attention. In spite of unseasonably hot weather, the theater was crowded most of the time, attesting to the popularity of this phase of the meeting.

Your Committee feels that the scientific exhibit section of the annual meeting is rapidly achieving a reputation for excellence. Although the number of exhibits is necessarily limited because of lack of space, the quality continues to improve, and we are very grateful to the physicians who are contributing their time and energy to preparing exhibits.

L. M. Overton, Chairman

REPORT OF THE WOMAN'S AUXILIARY ADVISORY COMMITTEE

As chairman of the Advisory Committee I submit the following report:

During the past year the activities of the Auxiliary were selected largely because of the national emergencies brought on by war and possible pestilence. The tragedy of war is a challenge to the genius of those who maintain the family fireside. With a new insistence this organization is meeting the trying needs of the hour. Much of rhetoric has been crowded out and emphasis has been placed on themes related to bolstering up morale and to maintaining the physical and mental fitness of our people.

Through their set-up of officers, their thirteen working committees and increasing personnel of members, intelligent health education has received a great impetus in our communities. This is an essential link in the national defense program. Together with the Woman's Auxiliary to the American Medical Association an intensive study of nutrition has been made in an effort to discourage vicious diet habits in the adult and to encourage balanced diets in childhood and youth. During the year their guests included their National President and also the National Director of Health Education of the American Medical Association.

An educational loan fund for student nurses is being sponsored, and for the eighth year promotion

of the annual health essay contest among high school students was resumed. This year the subject was, "Health, Strength and Beauty". Thirty-eight counties participated in last year's contest. Circulation of Hygeia is stressed among the members and their friends.

In their home communities the members of the Auxiliary promote discussions on child welfare, first aid, mental hygiene, cancer control, immunization against contagious diseases and tuberculosis testing, and lend their influence in legislation pertaining to

health matters. In all of this they serve as a contact between lay groups and the medical profession. The state organization occupied a space in the Iowa State Department of Health exhibit at the Iowa State Fair last fall and through this contact with the people of Iowa discovered that the doctor or nurse usually makes the health talks in Iowa communities.

The Auxiliary looks into the future with hope. It will bring to the medical affairs of our day keen insight, disciplined thought and courageous deeds.

James C. Hill, Chairman

Reports of Committees of the Council

REPORT OF THE EXECUTIVE CANCER COMMITTEE

The Executive Cancer Committee of the Iowa State Medical Society met in August in Des Moines, and in September and November of 1941 in Iowa City. The Committee also had joint meetings with the Executive Board of the Women's Field Army on these occasions.

At the meeting in Des Moines, it was the decision of the Committee that we should continue to operate along the same lines as in previous years, that we should continue the study of cancer conditions in the state, and should advocate the establishment of additional cancer clinics with the idea in mind of being able to furnish additional information toward the ultimate goal of obtaining proper cancer legislation, which proposal has been approved by the State Society. At this meeting we were privileged to have with us Dr. Walter Bierring, Commissioner of Health, and Dr. E. G. Zimmerer who is in charge of the cancer program of the Department of Health. A complete discussion of both of our programs revealed that we intended to work along the same lines and in cooperation with each other. Dr. Bierring and Dr. Zimmerer also met with the Executive Cancer Committee and the Executive Board of the Women's Field Army for Cancer Control, at which time it was decided that all three groups should cooperate in cancer educational programs to be carried on by the Women's Field Army.

It was felt that preparation of a manual for lay education on cancer would furnish a good approach toward accomplishing some of the things we hoped to do. A committee consisting of Dr. Morgan, Dr. Erskine and Dr. Plass was authorized to collect and write the necessary material for the manual; the costs of this are to be borne by the Women's Field Army with the assistance of the State Department of Health, which will help by compiling, editing and preparing material for the manual. Inasmuch as the American Society for the Control of Cancer no longer uses doctors as field representatives, and since the Women's Field Army cannot look for assistance along that line in the next campaign, it was decided to make arrangements with Dr. Bierring and Dr. Zimmerer for Dr. Zimmerer's assistance in the educational program of the state and he is now working

along this line. At this meeting it was also voted to ask Mrs. A. V. O'Brien of Iowa City to continue to act as State Commander, Dr. H. W. Morgan was elected to act as chairman of the Executive Board of the Women's Field Army, and Dr. M. C. Hennessy was elected to continue as finance officer of the Women's Field Army.

Following this meeting some difficulties having to do with our relationship with the national headquarters of the Women's Field Army developed. There were questions raised and decisions made by the national headquarters of the Women's Field Army with which the Executive Cancer Committee of the State Society and the Executive Board of the Women's Field Army did not feel they could agree without further clarification. These difficulties concerned the distribution of funds, the type of program for lay education, and various reports required by the national organization, and also dealt with the question of where the control of the cancer education program was to lie. This necessitated a joint meeting in Iowa City September 28, at which meeting it was decided that we should notify national headquarters of our position which was outlined as follows:

1. The Executive Cancer Committee of the Iowa State Medical Society and the Executive Board of the Women's Field Army propose to continue the program of lay and medical education as has been done heretofore.
2. As regards the distribution of funds, we propose to return thirty per cent of enlistment fees only to the national office.
3. We do not approve the apparent tendency of the national office to subordinate cancer education to other functions, such as women's clubs.
4. We disapprove the tendency to transfer cancer education to lay individuals rather than to keep it under strictly medical control.
5. We object to the tendency to create more paid positions. The money so expended should be spent for education.
6. Before the Women's Field Army was organized in Iowa we already had a plan in operation for lay and professional education in cancer. Because the Women's Field Army program fit into our program, we were glad to cooperate with it. We

- should like to continue such cooperation if a satisfactory alliance can be resumed.
7. We object to the numerous required reports without any receipt of information from the national group in return. We do not propose to ask the State Commander to make such reports.
8. We propose to continue the program of lay education, even if the National Women's Field Army should withdraw its support from us.
9. We will continue as an integral part of the Women's Field Army provided that:
- a. Control of the program is entirely in our hands.
 - b. The State Commander is responsible to us.
 - c. All contact with national headquarters is made only with the Chairman of the Executive Board of the Iowa Division.
 - d. The allocation of funds to the national office shall follow our 1941 pattern.

This decision on our part was communicated to national headquarters and resulted in an attempt to clarify the situation and finally it was proposed that we have a joint meeting with Dr. Samuel Binkley of the American Society for the Control of Cancer. This meeting was held November 1 in Iowa City. Dr. Binkley failed to arrive at the University Hospital at the appointed time at 10 a. m. because of a storm. Those present were: Mrs. A. V. O'Brien, Dr. Morgan, Dr. Erskine, Dr. Plass and Dr. M. C. Hennessy. All were still in agreement with regard to the points previously made. After a discussion of the correspondence between Doctors Little and Plass, we recessed until 6 p. m. when we met at the Jefferson Hotel shortly after Dr. Binkley's arrival in Iowa City. Dr. Binkley explained his connection and association with the American Society for the Control of Cancer and with the Women's Field Army. He also explained the procedure followed in choosing medical representatives and the reasons for the changes which have recently been made. Our Committee explained to him that we had no desire to interfere with the medical personnel but we felt medical representatives were of more value in the educational program of the Women's Field Army than lay persons because of their professional viewpoints. The past and present plans of the Women's Field Army were outlined and discussed. Dr. Binkley discussed the possibility of our establishing a branch of the American Society for the Control of Cancer in Iowa and incorporating it as a non-profit organization.

The question of dues and the percentage returned to the national organization were discussed and no conclusions were reached. Dr. Binkley was to discuss this matter with the central office and to communicate with the Iowa committee at a later date.

The matter of regional representatives of the Women's Field Army, the policy followed in their appointment, and the stand of the Iowa Committee opposing this policy were fully discussed. It was agreed by all present that these representatives should not enter into the program in Iowa and that they should have no function in Iowa unless called

upon by the Iowa committee. In conclusion it seemed evident that the Iowa program was in fairly close accord with the program of the American Society for the Control of Cancer although there are some minor differences of policy and finance.

Following this meeting Dr. Binkley notified us he had reported our position and the recommendations we made to the American Society for the Control of Cancer, and our position now seems to be clarified except for the final decision with reference to the distribution of funds collected in Iowa.

In conclusion the Committee feels that we should definitely continue along lines which have been in operation for the past few years and that we should continue to take whatever steps may be required to accomplish the necessary legislation for a good, sound cancer program for this state. Finally the Committee feels that the educational enlistment campaign of the Women's Field Army will not be as favorable as in former years because of the war emergency that now exists.

The committee in charge of the cancer manual has submitted the following report:

"On January 1, 1941, the Committee had a balance of \$182.12. During the year one manual was sold for \$1.00, and 58c was expended for expressing several manuals to the Iowa State Department of Health. Consequently, the balance now on hand is \$182.54. It seems doubtful whether there will be any further sale of the manual, since possible purchasers among large state organizations have largely been exhausted."

M. C. Hennessy, Chairman
W. H. Gibbon
A. W. Erskine
D. F. Ward
H. W. Morgan

REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

Since about the first of June the Committee on Industrial Health has been very busy with the coordination of the Speakers Bureau and the State Department of Health in a program on industrial health. Through a federal grant the State Department of Health was able to promote an educational campaign throughout the state, particularly in the industrialized counties. Up to December 2, 1941, nine refresher courses or institutes were held in the following cities: Burlington, Cedar Rapids, Mason City, Sioux City, Des Moines, Council Bluffs, Waterloo, Dubuque and Davenport. The Committee wishes to thank Dr. Carl M. Peterson, Secretary of the Council on Industrial Health of the American Medical Association, for his assistance in procuring different out-of-state speakers, but it is to Dr. Walter Bierring and the personnel of the Iowa State Department of Health that most of the credit is due for the advanced ground work in attempting to educate the profession of the state of Iowa toward its responsibility in industrial health measures.

We received a very favorable reaction from industrialists who attended these meetings. Quoting a statement of one, "I assure you the privilege of being permitted to attend such a meeting has been a real

stimulant toward the more favorable relationship between physician, labor and the industrialist. We appreciate most thoroughly the necessity of keeping labor's health to a maximum status as we know only by that may we hope to increase the output in industry which is so important at the present time".

There was also some criticism of the meetings. One physician remarked, "I have been doing compensation work for the past twenty years and I do not see the necessity of trying to educate the profession along such lines." But after attending one of the meetings he apologized for the remark and said he didn't realize what the profession as a whole might do if it would familiarize itself with some of the industrial health problems. He said, "I have never visited any of the plants from which I have received compensation work but from now on I am going to make it a point to visit them and I might be able to suggest improvements where some of the industrial hazards might be reduced".

The Committee wishes to emphasize that it feels the immediate interest shown in the institutes in all probability was due to the publicity in advance of the program date as carried out by the State Health Department and the Speakers Bureau. The nine institutes that were held drew a total attendance of around twelve hundred persons.

James E. Reeder, Chairman
C. H. Cretzmeyer
J. G. Macrae

REPORT OF THE SPEAKERS BUREAU COMMITTEE

To the Members of the Council:

During 1941 the Speakers Bureau conducted eleven postgraduate medical courses in seven councilor districts throughout the state. The course in the third district began in February in Spirit Lake and was comprised of eight monthly lectures. Twenty-two physicians from that locality were enrolled. Early in September the Carroll County Medical Society in the fourth district and the Greene County Medical Society in the fifth district began a series of eight biweekly lectures, with the physicians in Carroll and Jefferson being alternate hosts. Sixty-six men were present for one or more of the lectures. The Boone and Story County Societies held ten monthly postgraduate lectures, and records indicate that on an average sixty physicians attended the meetings held alternately in Boone and Ames. The other course in the fifth district was that of the Polk County Society which was the last half of the course started in the fall of 1940. The attendance at these meetings averaged about one hundred and fifty. Four courses were held in the sixth district. Marshalltown was the center for nine monthly lectures and had an approximate enrollment of sixty-five physicians. Tama County sponsored four post-graduate lectures, each held in a different town in the county and attended by twenty physicians in that society. Newton and Grinnell were the centers for the other two courses in this district. Each course was comprised of four weekly lectures. The Jasper and Poweshiek County Medical Societies

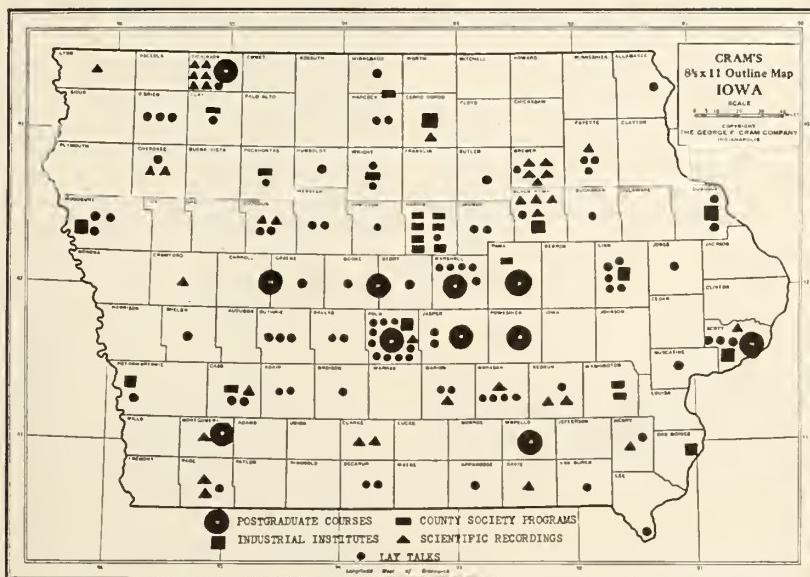
worked together on their courses this year; members of both societies attended the Poweshiek course in Grinnell during October and the Jasper course in Newton during November. The average attendance at each meeting was about twenty. The members of the Scott County Medical Society were hosts to the physicians in that vicinity for a series of five biweekly lectures beginning in September. This was the first postgraduate medical course held in the eighth district for several years and the lectures were attended by an average of seventy physicians. In the ninth district Ottumwa was again the center for the series of eight biweekly lectures which began in September. Ninety physicians were present for one or more of the meetings. The post-graduate course in the eleventh district was comprised of six lectures held every other week in Red Oak. Thirty men were enrolled for the entire series and eight others were present for one or more of the lectures.

While the attendance for the postgraduate courses this year did not exceed that of the previous year, it is felt that a great deal of benefit was derived from the various lectures pertaining to general therapeutics, medicine and surgery. The speakers were chosen on the basis of their knowledge of the subject and their ability to present material of interest to the general practitioner. Several well-known men were on the programs. Included were many practicing physicians in the state, as well as members of the faculty of the College of Medicine at Iowa City, and men from Chicago, Madison, Ann Arbor, Rochester, Minneapolis, Omaha, Kansas City and St. Louis. It is only through the splendid co-operation of these physicians that the Bureau's work could be carried on so successfully, and the Committee is deeply grateful for the time and effort they have expended.

Ninety-one medical talks were given before various lay organizations throughout the state. Of this number twenty-six were to women's clubs, twenty-four to parent-teacher associations and forty-one to service clubs.

During the year fifteen requests were received from county medical societies for the assistance of the Bureau in procuring speakers. These engagements were filled by members of the State Society at the invitation of the Bureau. During this same period, requests were received for thirty-six scientific recordings, twenty of which were for county medical society meetings. Hence, you will note the part these recorded lectures are playing in post-graduate education for the various county medical societies in the state. The remaining sixteen recordings were for hospital staff meetings and medical clubs. The response of the medical groups utilizing this service has been very gratifying to the Committee. The smaller organizations are especially pleased to have the opportunity to hear men nationally known in their particular field of medicine and welcome this type of postgraduate medical education.

A new project in which the Speakers Bureau participated during the year was that of industrial institutes. The Division of Industrial Hygiene of the



Iowa State Department of Health, in cooperation with the Speakers Bureau and Committee on Industrial Health of the Iowa State Medical Society, sponsored nine special institutes on industrial hygiene in key cities over the state. Each institute was comprised of an afternoon and evening session with leading authorities speaking on industrial hygiene, industrial health and occupational diseases. Many physicians throughout the state attended these meetings and heard the latest thought on occupational health.

Early in the year the Bureau again assisted in the annual Health Essay Contest sponsored by the Woman's Auxiliary to the Iowa State Medical Society. The topic, "Food for Health's Sake," aroused considerable interest and many well prepared manuscripts were submitted. The winner of the contest delivered her essay on the Iowa State Medical Society radio broadcast as the guest of the Speakers Bureau. In order to get the students started on their essays earlier, the Auxiliary announced the 1942 contest—an essay on "Health, Strength and Beauty"—in October of this year. The announcement and rules were sent out to the schools in the state by the Bureau.

Fifty-two radio talks were delivered over WOI in Ames and WSUI in Iowa City on our regular weekly broadcasts. Copies of these radio addresses were furnished by the Bureau upon request, and 1,711 copies of the manuscripts were mailed out in response to requests received. This is an increase of approximately seventy-five per cent in number of talks requested by the radio listeners, which is believed due to the fact that early in the year the broadcast over WOI was lengthened to thirty minutes and the medical talk incorporated in a program of organ music. After consulting the radio station,

it was determined that a conservative estimate of the audience for the year would be more than 30,000 people for Ames, and in addition the Iowa City audience, of which no estimate was made. An announcement concerning smallpox has been made in conjunction with each broadcast during the year in an effort to reduce the incidence of the disease in Iowa. In response to inquiries received from the listening audience, approximately three hundred bulletins concerning the disease have been sent out.

The accompanying map depicts graphically the various activities and accomplishments of the Speakers Bureau during 1941. It will be noted that the services extend to practically every section of the state; however, the enthusiastic support of all Iowa physicians is mainly responsible for the success of the Bureau.

The financial report of the Speakers Bureau is given, first for the year 1941, and then for the entire period of its existence.

Account for 1941	
Income	
Receipts from Postgraduate Medical Courses	\$2,211.00
Total Speakers Bureau Income.....	\$2,211.00
Expenditures	
Salaries	\$1,605.90
Travel Expense for Speakers.....	431.24
Postgraduate Course Travel Expense.....	1,830.82
Radio	501.02
Stationery, Printing, Telephone, etc.....	522.80
Miscellaneous	49.77
Total Speakers Bureau Expenditures.....	\$4,941.55
Deficit for 1941.....	\$2,730.55
Funds Received from Iowa State Medical Society to offset Deficit.....	\$2,730.55

Account 1930 Through 1941

Year	Disbursements	Receipts	Deficit
1930.....	\$ 306.26	\$ 2,780.00	\$ 2,473.74*
1931.....	3,949.97	3,939.34	10.63
1932.....	5,855.70	2,805.58	3,050.12
1933.....	3,744.06	3,650.70	93.36
1934.....	4,316.30	4,350.90	34.60*
1935.....	5,435.56	5,151.97	283.59
1936.....	4,360.13	3,431.03	929.10
1937.....	5,741.55	3,042.24	2,699.31
1938.....	5,493.99	3,806.42	1,687.57
1939.....	4,427.95	1,766.75	2,661.20
1940.....	4,376.53	3,384.31	992.22
1941.....	4,941.55	2,211.00	2,730.55
Total.....	\$52,949.55	\$40,320.24	\$12,629.31

(*) Balance instead of Deficit.

The accompanying figures relative to 1941 activities were compiled in an effort to portray at a glance the extent of the Bureau's work during the year. However, it is impossible for them to reveal the enthusiastic support of the physicians who assisted in these fields of endeavor.

1941 SPEAKERS BUREAU ACTIVITIES

Number of Medical Talks arranged for Lay Groups	91
Number of County Medical Society Programs arranged (Physician Hours of Instruction not determined)	35
Number of Scientific Recordings sent out for Medical Meetings	36
Number of Radio Talks arranged.....	52
Number of Postgraduate Medical Lectures (2 Hours)	70
Approximate Number of Physician Hours of Postgraduate Medical Instruction.....	5,440

Joseph B. Priestley, Chairman
Walter R. Brock
James Dunn
Roy C. Gutch
T. Frank Hersch
Sydner D. Maiden

REPORT OF THE TUBERCULOSIS COMMITTEE

The Tuberculosis Committee met in the Central office of the Iowa State Medical Society on December 11, 1941. A policy for the year was formulated as follows:

1. To contact every county society and request that a local committee on tuberculosis be appointed, and through this committee to make every effort to see that at least one speaker or paper on tuberculosis is presented to the society during the coming year. Also to give all possible assistance to the local societies for the continued improvement of any program toward the eradication of tuberculosis which is now being carried on.

A suggested list of speakers for such programs was presented by this Committee to the Speakers Bureau of the Iowa State Medical Society.

This policy has been carried out.

J. Carl Painter, Chairman
Edward F. Beeh
Ray J. Harrington
John Russell
Herbert E. Stroy

REPORT OF THE IOWA DIVISION, WOMEN'S FIELD ARMY

This report is not like the usual formal report of activities that is often made at stated periods to an organization or an executive committee. The Women's Field Army, now in its sixth year, is still in its pioneer setting. I had looked forward to the year's campaign with some apprehension because of the uneasiness of the times in which we are living, and because of the likelihood that many of us would be making out-of-the-ordinary contributions, either financial or personal, to the national welfare. To a certain extent this fear was justified. Several of our captains who had done outstanding work in the past years had to leave when their husbands were called into federal service. Many captains resigned because of lack of cooperation with the county society and the county cancer chairman. Wherever possible an attempt was made to correct the situation. In many cases it was too late to find another woman to take charge of the cancer campaign.

The work of the State Commander of the Women's Field Army is what may be termed a "full time" job. Many persons think only in terms of the annual enlistment campaign. This is an erroneous conception of the time required to build and maintain a cancer control program in the State of Iowa. After the enlistment campaign, time must be given to many reports, preparing the budget, routing the cancer models, films for county fairs, state fair, and cattle congress, mailing copies of the year's campaign results to each of the workers, and preparing the enlistment campaign results for the July Bulletin.

The first great problem is the problem of officer personnel. With campaign reports come resignations. Many of these are due to discouragements. To find new leaders willing to take on one more job, women who have the necessary time, women also who have the spirit of unselfishness and can ignore their own desires for the good of the cause, women who have the intelligence, vision, courage and tact; to find these women; to help them with the work of organization; to encourage and advise and stimulate—this is a full time job and never ending. Sometimes this job can be done through letter writing. Quite often it takes personal contact. Consequently the State Commander must travel over the state, stopping to call on all of the cancer chairmen and captains on her way. One of the greatest satisfactions of life is to see the results of a good job well done. Unfortunately, ours, like all educational work, must take the long view; we must not be discouraged if the results of our efforts are not immediately apparent. Shortly after the campaign a letter came from a county captain, telling of a woman who, as a result of reading some of our literature, had a malignant lump removed from her breast. It seems hard and inhuman to attempt to evaluate a human life in terms of dollars and cents, but if in this case the useful life of a mother of a growing family is prolonged, the contributions from the entire state are very worthwhile.

Among the activities of the year, I list the following:

Attended the Regional Assembly of the Women's Field Army held at Rochester, Minnesota, February 6 and 7. Sister states participating were Minnesota, Wisconsin, North Dakota and South Dakota.

Meetings other than county Women's Field Army meetings, attended the three day Biennial meeting of the Iowa Federation of Women's Clubs at Fort Dodge, May 6-7-8.

Attended the fall conference of the Iowa Federation of Women's Clubs in the nine districts.

Attended the 8th district public health conference at Manchester.

Attended the Cattle Congress at Waterloo, Iowa, and arranged for the showing of the "Cancer Women Unit" rented from a sister state.

Attended four meetings of the Cancer Committee and the Executive Committee of the Iowa State Medical Society.

Attended one meeting on December 14th with the councilors.

We have had over 5,000 column inches of publicity; 119 lectures by doctors given to an estimated attendance of 4,000 at small and large gatherings; 431 talks were given by the lay people; 46 radio talks and 109 spot announcements were made; 17 theatres ran the 35 millimeter "Choose to Live" film. Some of these theatres exhibited the latex models of typical cancers in their lobbies; 47 showings of the 16 millimeter "Choose to Live" film were given on sound track projectors; 143,000 pieces of literature on cancer control were distributed to adults during this campaign. In addition several hundred special requests for literature were filled; 33,000 copies of Dr. F. L. Rector's booklet, "The Story of Cancer for High Schools," were distributed through the schools in organized counties. The Iowa Cancer Bulletin has been issued quarterly and sent to all enlisted members, contributors, newspapers, libraries, county health unit chairmen and nurses, Home Project chairmen and leaders, a total of 9,000 copies per issue.

The latex models were shown at 29 meetings. Three sets of "Milestones in Cancer Control" have been shown at the state conventions of the Iowa Federation of Women's Clubs, Catholic Daughters of America, Federated Business and Professional Women's Club, and the Woman's Auxiliary. Eight thousand posters were displayed in hospitals, banks, post offices, libraries, department and drug stores.

Dr. F. L. Rector, national youth lecturer for the American Society for the Control of Cancer, spoke at eight colleges, 15 high schools and 12 other public meetings to 8,000 people. Everywhere he spoke he was most enthusiastically received. College presidents and high school principals have written in complimenting Dr. Rector for his masterly presentation of a difficult subject to the students in their charge.

1941 Analysis of Membership and Contributions

DISTRICT NO. 1

Dr. Leslie L. Carr, West Union, Councilor	
Allamakee County—Not organized.	
Bremer County—Not organized.	
Chickasaw County—Not organized.	
Clayton County—Not organized.	
Fayette County—Not organized.	
*Floyd County—Enlistments and contributions.....	\$ 204.10
Howard County—Not organized.	
Mitchell County—Not organized.....	2.00
Total	\$ 206.10

DISTRICT NO. 2

Dr. C. H. Cretzmeyer, Algona, Councilor	
Butler County—Enlistments and contributions.....	\$ 35.50
Cerro Gordo County—Enlistments and contributions.....	102.10
Franklin County—Enlistments and contributions.....	7.47
Hancock County—Enlistments and contributions.....	99.20
Humboldt County—Not organized.	
Kossuth County—Not organized.	
*Worth County—Enlistments and contributions.....	210.99
Wright County—Enlistments and contributions.....	88.30
Total	\$ 542.86

DISTRICT NO. 3

Dr. F. P. Winkler, Sibley, Councilor	
Clay County—Enlistments and contributions.....	\$ 21.00
Dickinson County—Not organized.	
Emmet County—Enlistments and contributions.....	74.72
Lyon County—Enlistments and contributions.....	22.60
*O'Brien County—Enlistments and contributions.....	397.99
*Osceola County—Enlistments and contributions.....	117.18
Palo Alto County—Not organized.	
Pocahontas County—Not organized.....	1.00
Sioux County—Not organized.....	7.00
Total	\$ 641.49

DISTRICT NO. 4

Dr. James E. Reeder, Sioux City, Councilor	
Buena Vista County—Enlistments and contributions....	\$ 119.04
Carroll County—Not organized.	
Cherokee County—Not organized.	
Crawford County—Enlistments and contributions.....	15.50
Ida County—Not organized.....	4.00
Monona County—Not organized.	
Plymouth County—Enlistments and contributions....	74.75
Sac County—Not organized.	
Woodbury County—Enlistments and contributions....	600.13
Total	\$ 813.42

DISTRICT NO. 5

Dr. Edward F. Beeh, Fort Dodge, Councilor	
Boone County—Not organized.	
Calhoun County—Not organized.	
Dallas County—Not organized.	
Greene County—Not organized.	
Guthrie County—Not organized.	
Hamilton County—Not organized.	
Polk County—Not organized.	
Story County—Not organized.	
Webster County—Enlistments and contributions.....	60.00
Total	\$ 60.00

DISTRICT NO. 6

Dr. C. W. Ellyson, Waterloo, Councilor	
Benton County—Not organized.	
Black Hawk County—Enlistments and contributions....	\$ 84.50
Grundy County—Not organized.	
Hardin County—Not organized.	
Iowa County—Not organized.	
Jasper County—Not organized.	
Marshall County—Enlistments and contributions.....	67.88
Poweshiek County—Not organized.	
Tama County—Enlistments and contributions.....	15.40
Total	\$ 169.78

DISTRICT NO. 7

Dr. H. A. Householder, Winthrop, Councilor	
Buchanan County—Not organized.	
Cedar County—Not organized.	
Clinton County—Not organized.	
Delaware County—Not organized.	
*Dubuque County—Enlistments and contributions.....\$ 749.20	
Jackson County—Not organized.	
Jones County—Not organized.	
*Johnson County—Enlistments and contributions..... 672.00	
Linn County—Not organized..... 15.00	
Total \$1,436.20	

DISTRICT NO. 8

Dr. C. A. Boice, Washington, Councilor	
Des Moines County—Not organized.	
Henry County—Enlistments and contributions.....\$ 17.00	
Jefferson County—Not organized..... 5.00	
Lee County (lower)—Enlistments and contributions..... 17.00	
Lee County (upper)—Not organized..... 1.00	
Louisa County—Not organized.	
Muscatine County—Not organized.	
Scott County—Not organized.	
*Van Buren County—Enlistments and contributions..... 239.50	
Washington County—Enlistments and contributions..... 41.57	
Total \$ 321.07	

DISTRICT NO. 9

Dr. R. C. Gutch, Chariton, Councilor	
Appanoose County—Not organized.	
Davis County—Not organized.	
Keokuk County—Not organized.	
Lucas County—Not organized.	
Mahaska County—Not organized.	
Marion County—Not organized.	
Monroe County—Not organized.....\$ 1.00	
Wapello County—Not organized.	
Wayne County—Not organized.	
Total \$ 1.00	

DISTRICT NO. 10

Dr. James G. Macrae, Creston, Councilor	
Adair County—Enlistments and contributions.....\$ 22.00	
Adams County—Enlistments and contributions..... 5.00	
Clarke County—Not organized.	
Decatur County—Not organized.	
Madison County—Not organized..... 6.00	
Ringgold County—Enlistments and contributions..... 35.67	
Taylor County—Enlistments and contributions..... 15.45	
Union County—Not organized.	
Warren County—Enlistments and contributions..... 86.28	
Total \$ 170.40	

DISTRICT NO. 11

Dr. M. C. Hennessy, Council Bluffs, Councilor	
Audubon County—Not organized.	
Cass County—Enlistments and contributions.....\$ 46.00	
Fremont County—Not organized..... 2.00	
Harrison County—Not organized.	
Mills County—Not organized.	
Montgomery County—Not organized.	
Page County—Not organized.	
Pottawattamie County—Enlistments and contributions.. 219.75	
Total \$ 267.75	
TOTAL ENLISTMENTS AND CONTRIBUTIONS FOR THE YEAR 1941.....\$4,630.07	

*Denotes counties having exceeded their quota (one dollar for each one hundred population).

Iowa Division Women's Field Army for the
Control of Cancer

ANNUAL FINANCIAL STATEMENT

January 1, 1941 to December 31, 1941

Balance in Council Bluffs Savings Bank, Jan. 1, 1941....\$3,790.07

RECEIPTS

1941 Enlistments	\$1,630.00
Memorial Fund	561.50
Other contributions	2,432.92
Address labels	5.65
Total	\$4,630.07 \$8,420.14

DISBURSEMENTS

Organization and campaign.....	\$ 689.94
Office help	304.10
Postage and express.....	182.09
Office supplies	110.75
Telegram and telephone.....	201.79
Circulars, pamphlets, etc.....	1,138.09
Bulletins	1,089.94
30 per cent to National.....	494.88
Memorial fund	711.50
Miscellaneous	58.68
Total.....	\$4,981.76 4,981.76

Balance in Council Bluffs Savings Bank Dec. 31, 1941....\$3,438.38

If the Women's Field Army is to continue and to prosper, we must have more earnest and efficient workers in the field. Many counties in our state have never been organized and consequently have not benefited by our educational program.

Respectfully submitted,

Mrs. Arthur V. O'Brien, State Commander

The Speaker: We come now to the supplemental reports. The report of the secretary.

The Secretary: I have no supplementary report.

The Speaker: The report of the treasurer.

Dr. James A. Downing: No supplementary report.

The Speaker: The supplementary report of the Chairman of the Council.

Dr. James E. Reeder: None.

The Speaker: The report of Delegates to the American Medical Association, Dr. Thornton.

Dr. T. F. Thornton: I have no additional report.

The Speaker: The reports of the Standing Committees of the House of Delegates. Constitution and By-Laws, Dr. John H. Henkin.

The Secretary: Dr. Henkin wired me that he will make his report Friday.

The Speaker: Finance, Dr. E. C. McClure.

Dr. E. C. McClure: No additional report.

The Speaker: Medical Economics, Dr. E. E. Shaw.

Dr. E. E. Shaw: I have no supplementary report to make, but because of various questions that have come up, I should like to request that the House of Delegates consider definitely one proposition. The matter of prepayment plans for medical care is coming up all over the country. Numerous states are considering it. Dr. Bernard and several other doctors and I were in Chicago in February, where we spent a day and a half at a meeting, and after listening to those conversations it seems wise that some definite action be taken by the House of Delegates of the Iowa State Medical Society on this subject. A recommendation was made four years ago that we continue the study of this subject, especially in relation to indemnity types of schemes. None of the present schemes, with possibly one exception, is of this character. They are all service types of schemes, and we would like to ask that this House of Delegates seriously discuss the matter of whether or not Iowa wants to go ahead. We do not feel that it is within the province of our committee to decide that we shall go ahead or that we shall not go ahead, but we want our committee or some other committee to do it. We think the House of Delegates should seriously discuss the necessity

or the wisdom of going ahead with any prepayment medical scheme and should then appoint a committee to investigate plans, or else it should authorize the present committee to go ahead or instruct it not to go ahead, so that whatever is done in the future will be definitely the wish of the Society and not the decision of one small committee. I should like consideration of this phase of my report.

Dr. Reeder: This problem of voluntary health insurance has gathered great momentum in the last few years, and the set-up, for example, of hospital insurance is somewhat along that line. We had a discussion of it just last week in our county medical society and we rather frowned on the whole thing, but I feel that as long as it is gathering such momentum throughout the country I move, Mr. Speaker, that you appoint a committee to investigate thoroughly and report back to the House of Delegates at its next session, or if the matter should become urgent we could call a special meeting of the Executive Council to handle the matter.

Dr. M. C. Hennessy: I second the motion.

The Speaker: You have all heard the motion. It has been seconded. Is there any further discussion? If not, all in favor say "aye"; contrary "no." *The motion is carried.*

Medical Education and Hospitals, Dr. Jack V. Treynor of Council Bluffs. Is Dr. Treynor present? Medicolegal, Dr. Frank A. Ely. I think we should have the report of the Committee on Necrology. If the House has no objection, I will have Dr. Macrae give that report. The delegates will stand while the report is being given.

The delegates arose and Dr. J. G. Macrae presented the report of the Committee on Necrology.

The Speaker: Publications, Dr. Lee F. Hill.

Dr. Lee F. Hill: The report of your Publications Committee for this year may be brief. In general the Committee feels that the JOURNAL has had another successful year. One innovation most of you have probably noticed is the change to colored cover pages. This was made possible by several advertisers who requested color in their advertisements. The additional revenue from this source was sufficient to meet the additional expense of the colored covers. The Publications Committee believes unanimously that the addition of the colors has made a real improvement in the appearance of the JOURNAL.

The statistics for 1941 as compared with the two previous years are given in the table below.

	1939	1940	1941
Reading Pages.....	640	626	618
Advertising Pages.....	320	318	318
Percentage of Reading Pages.....	67%	66 3%	66%
Original Articles.....	107	101	85
Editorials.....	55	58	66
Total JOURNAL Expenditure.....	\$11,545.70	\$11,564.09	\$11,868.94
Total JOURNAL Income.....	9,046.60	7,723.65	7,926.35
Net Expenditure for JOURNAL.....	\$ 2,499.10	\$ 3,840.44	\$ 3,942.59
Number of State Society Members.....	2,430	2,475	2,480
Net Expenditure per Member.....	\$ 1.03	\$ 1.55	\$ 1.59

The fewer original articles were directly due to a number of them being longer than usual and to the

fact that the war situation made necessary the considerable increase in the number of editorial pages. The slight increase in the total expenditure for the JOURNAL was due to the increase in the cost of publication.

Again, this year the Publications Committee appeals to each delegate to urge the members of his county society to take the time sometime during the year to drop a note to one or more of our advertisers. As we have said before, the amount of advertising we are able to carry in the JOURNAL varies directly with the results the advertisers feel they secure for the dollars they spend. If we are to keep the cost of the JOURNAL down to a minimum, we must retain the good will of our advertisers. The way to do that is to let them know when you approve of their product.

During the past year the JOURNAL has done its best to keep the members of the Society informed on all matters of interest to physicians pertaining to the war situation. This policy will be continued in the future. We shall also strive to maintain the high standard of excellence which the JOURNAL has always enjoyed. The Publications Committee welcomes your criticisms and suggestions.

The Speaker: Next is the report on Public Policy and Legislation, Dr. R. D. Bernard.

Dr. Bernard: Last night the Executive Council of the Iowa Interprofessional Association, after a long session, decided to retrench during the period of the emergency, and with that in mind it voted to reduce the dues of the component societies 50 per cent. It also voted to omit the second annual convention, which would normally occur this fall and to postpone it a year. I am sure that will be welcome news to us, not because of the fact that the \$150.00 which we have been contributing to this organization is a particular drag upon us, but it shows at least that the interprofessional organization has its ears to the ground and knows what is coming, and it is anxious to curtail expenses in accord with the curtailed income of the societies.

Considering the legislative picture this next year, I think you all received the legislative letter dated April 9. This is the first time that the Legislative Committee has made any attempt to call the attention of the various county societies to the fact that something must be done in the primaries. If you don't watch your primaries you cannot expect to have the right men elected.

We are asking you gentlemen to see if you haven't medical men somewhere in your counties who are political-minded enough to run for office and at least give us a representative in the Senate and a little more help in the House. We feel that the picture this winter will be a very difficult one to handle. All types of legislation will be brought forth. The social security set-up is bound to be a very intricate thing, and we think that perhaps if you doctors will go back home and check it, as we have requested you to do, you may be able to pick out men who are competent to sit over there on the hill and give us a fair show.

That is all I have to say, gentlemen, except that if you want to know anything about these candidates, I have a list in my room and I can give you some information on practically every man who has filed papers in the state of Iowa and it may be of some benefit to you when you go back.

The Speaker: You have heard the supplementary report of the Legislative Committee Chairman. What is your pleasure?

Dr. Hennessy: I move that it be accepted and approved.

Dr. Householder: I will second the motion.

The Speaker: You have heard the motion, gentlemen. It has been seconded. Those in favor say "aye"; contrary "no." *The motion is carried.*

The Speaker: That finishes the reports of the standing committees. Now we have the reports of the special committees. First is the Baldridge-Beye Memorial Committee by Dr. Willis M. Fowler. Is there a supplementary report? Next is the report of the Child Health and Protection Committee, by Dr. H. E. Fransworth. Is there a supplementary report?

Dr. H. E. Farnsworth: There are just two things I would like to bring before you. You will notice in the handbook that we ask for a change in the name of the committee, which you have accepted. In regard to the immunization campaign which we have been carrying on the past three years, I have a few figures here which I think are of interest to show that some good is being done. Last year, in 1941, there were 114 cases of smallpox reported, the lowest on record. During the first three months of 1941, 49 cases were reported; during the first three months of 1942 only six cases were reported.

Of the counties cooperating in this campaign in 1939, 45 counties cooperated for diphtheria and 89 for smallpox. In 1940, 75 counties cooperated for diphtheria and 74 for smallpox. In 1941, 69 counties cooperated in the diphtheria campaign and 89 in the smallpox.

Material for 18,505 immunizations was sent to the counties by the State Board of Health. That does not include material used in your private practice which you purchased yourself. Material for 69,250 smallpox vaccinations was also distributed. In 1940 the figures were 54,261 for diphtheria and 42,275 for smallpox; in 1941, 42,862 for diphtheria and 34,618 for smallpox, making a total of 115,628 youngsters who were immunized for diphtheria and 146,143 for smallpox during the three-year period. Altogether during these three years (this is an interesting breakdown) there were 159,043 diphtheria immunizations administered under the program, not taking into consideration private practice, and there were 132,590 births. Consequently, we had an excess of immunizations for diphtheria over births of 26,453, showing that we are gaining ground. There were 197,808 immunizations for smallpox during the three-year period with 132,590 births, showing an excess over births of 65,218. Of course, when you add the diphtheria and smallpox immunizations given in private practice, results seem rather cheerful and we expect to continue the program this fall.

After a conference with Dr. Bierring, of the State Department of Health, this committee would like to suggest the House of Delegates recommend to the State Board of Health discontinuance of its manufacture of convalescent serum for anterior poliomyelitis. It seems to be pretty well agreed that the serum is of little or no value and the money saved in collecting the blood for poliomyelitis convalescent serum could be released and perhaps expended in distributing more measles and scarlet fever convalescent serum, both of which are considered to have considerable value. Therefore this committee would like to suggest to the House of Delegates that it recommend to the State Board of Health, and this meets with Dr. Bierring's approval, the discontinuance of convalescent serum for poliomyelitis. I move the acceptance of this supplementary report.

Dr. Lee F. Hill: I second the motion.

The Speaker: You have heard the motion and it has been seconded. All in favor say "aye"; contrary "no." *The motion is carried.*

The Speaker: Next is the Fracture Committee, Dr. Donald C. Conzett. The Historical Committee, Dr. Walter L. Bierring. The Medical Library. Any supplementary report?

Supplementary Report of Iowa State Medical Library

Dr. Jeannette Dean-Throckmorton: I am pleased at this time to bring you a short supplemental report. Despite the fact that many of the younger doctors who were doing extensive reading have entered military service in the past year, there was an increase in the number of pieces loaned although there was a slight decrease in the number of patrons served. There has been a decided increase in the number of gifts received by the State Medical Library, which of course is gratifying. Among the many doctors who supported us with their gifts of books and journals were: Dr. John T. Hanna, Dr. C. H. Graening, Dr. W. L. Aleorn, Dr. Ben G. Budge, Dr. J. B. Synhorst, Dr. Dean W. Harman, Dr. J. B. Priestley, Dr. H. L. Walker, Dr. George T. Pearson, Dr. W. W. Pearson, and many others whom time and space do not permit me to include, but to whom I am equally grateful. Through the generosity of Dr. Frank M. Fuller of Keokuk, the library has come into the possession of Volume I of the Western Medico-Chirurgical Journal (1850), the first medical journal published west of the Mississippi River, the only other copy of which is in the Surgeon-General's Library in Washington, D. C. Other valuable books and journals have been given to the library this week by Dr. Fuller. Dr. O. A. Geeseka of Mt. Pleasant recently gave to the medical library not only his diploma from the College of Physicians and Surgeons of Keokuk, 1878, but also the framed picture of the medical faculty for that year, likewise his license to practice medicine issued by the State Board of Medical Examiners in 1893. All these treasures have historical value which will increase with the passing years.

The Medical Library Association has created a Committee to aid medical libraries in England and

Europe to keep their files of medical periodicals unbroken during the present war. Many issues are lost at sea, and some libraries have suffered direct hits in air raids. I am asking you for your old journals. With an imminent paper shortage, attempts are being made to collect old periodicals for pulp. May I appeal to you not to give your medical journals in the paper drives, but instead to send them to the medical library, so that we may use those that we need and save the remainder for libraries less fortunate than we. Send these journals to the medical library express collect, third class. We shall be glad to send labels for your convenience if you wish.

In February of this year we sent to New York to be forwarded to China 150 medical journals, mostly Journals of the American Medical Association, which had been requested by the Librarian of Willis Pierce Memorial Hospital, Foochow, Fukien, China, to fill its files. We have also made shipments to Australia, New Zealand and England. I am amazed at the cheerful courage and scientific spirit of these doctors, who under continual threat of air raids nevertheless want to read medical literature. Will you help me save medical journals for them?

The Medical Library mimeographed lists of its more recent books, and mailed them to the doctors of the state last summer.

It is with pleasure I report that the Retrenchment and Reform Committee last December allocated to the medical library \$1,000 for binding, with which we expect to get 660 volumes bound. It was suggested at that time that we prepare a long-time binding plan to present to the next legislature, whereby over a period of years we may be able to bind current journals and a few back issues, so that finally all will be bound. We shall follow this suggestion.

It has been a pleasure to serve the doctors of the state of Iowa the past year, and I thank you kindly for your generous gifts and your splendid spirit of cooperation.

Dr. Throckmorton: I move that this report be accepted.

The Speaker: Is there a second to the motion? . . . *The motion was seconded . . .*

The Speaker: All in favor say "aye"; contrary "no." *The motion is carried.* Medical Preparedness, Dr. T. F. Suchomel.

Supplementary Report of the Committee on Medical Preparedness

Dr. Suchomel: Since submitting the report of this committee for publication in the handbook, events have been transpiring with great rapidity. The most important activity has been that associated with the Procurement and Assignment Service in Washington, D. C. under the direction of Dr. Sam F. Seeley, Executive Officer. Advice from this service has appeared as follows:

Premedical Students: Plans have now developed completely for the deferment from Selective Service of premedical students who are enrolled in Class A

schools. These deferments are made upon written recommendation of the dean of the school and must be renewed every ninety days. If draft boards do not defer such students, the latter have the right of appeal to Appeal Boards and are urged to exercise same.

Medical Students: Medical students are urged to accept commissions in the Medical Administrative Corps Reserve as second lieutenants or as Ensigns H. V. (P.) in the Naval Reserve. This action will automatically remove the student from the jurisdiction of the draft board. We have assurance that such students will be allowed to complete their medical education and internships before being eligible for service.

Internes: All medical students upon completion of their medical education should apply for commissions as first lieutenants in the Army Medical Corps Reserve or as lieutenants, junior grade, in the Navy. They will then be allowed to complete their year's internship before being called into active service. Those who fail to do this are liable for military service under the Selective Service Act.

Physicians under forty-five years of age: All physicians in this category are liable for military service, and those not holding commissions are subject to induction under the Selective Service Act. In order that their services may be utilized in a professional capacity as medical officers, they should be made available for service when needed. Wherever possible their present positions in civil life should be filled or provisions made for filling their positions by those who are (a) over forty-five years of age, (b) physicians under forty-five, who are physically disqualified for military service, (c) women physicians and (d) instructors and those engaged in research who do not possess an M.D. degree, whose utilization would make available a physician for military service.

Physicians over forty-five years of age: Physicians in this group will be registered. Those who are not absolutely essential in their present capacities will be asked by the Procurement and Assignment Service to serve in various governmental, military and civil agencies.

The foregoing statements might indicate to some that we are again headed toward an indiscriminate drawing of physicians for governmental service. That is not the case. In January, 1942, the chairman of your committee received a communication from Mr. Paul V. McNutt appointing him as chairman of the Iowa Advisory Committee on Procurement and Assignment. As soon as the Procurement and Assignment Service swung into action a letter was sent from our office to the various county medical preparedness committees and to county secretaries where no committee was appointed. (Nine counties have not as yet named a committee on medical preparedness, after over eighteen months of prodding. They are Allamakee, Appanoose, Carroll, Clayton, Iowa, Jackson, Jones, Keokuk and Plymouth.) In this letter, I returned the results of our survey of April 1941, and asked for a reconsideration.

tion and the recording of changes occurring in the intervening nine months' period. I wish to emphasize the importance of naming these committees and I make a direct appeal to the delegates of those nine counties, to see that this is attended to immediately upon returning home.

Since my appointment as chairman of the Advisory Committee on Procurement and Assignment for Iowa, I have received many lists of Iowa doctors for certification as to availability or non-availability for active service. Upon receipt of these requests, I immediately turn to the individual county reports and am guided by the recommendation of the medical preparedness committee of that county. When no report is made, I must rely upon the judgment of the central committee for the state as to whom we should certify as available for service. Questions involving the other professions will be referred to the representative on the Advisory Committee. The personnel of the Committee is as follows:

Medicine: T. F. Suchomel, Cedar Rapids, Chairman, and M. C. Hennessy, Council Bluffs.

Dentistry: C. S. Foster, Cedar Rapids.

Veterinary Medicine: A. R. Menary, Cedar Rapids.

Hospitals: T. P. Sharpnack, Des Moines.

Education: E. M. MacEwen, Iowa City.

Nurses: Vera M. Sage, R. N., Des Moines.

The organization of Procurement and Assignment Service for doctors in Iowa is broken down to include the eleven councilor districts. A chairman has been appointed in each district, and he has been furnished with copies of the recent re-survey made of the Iowa physicians relative to their availability for governmental service. It will be the duty of each chairman to make a complete, careful study of each individual county report, and note any changes he deems fit. The present lists coming from the Procurement and Assignment Service are taken from the blanks returned in December, 1941. Between 15,000 and 20,000 have been received in Washington, D. C.

Just a word about osteopaths and how they fit into the picture of Medical Preparedness. An inquiry concerning osteopaths was sent to General Lewis Hershey, Federal Director of Selective Service. He referred our inquiry to Dr. Sam F. Seeley, executive officer of the Procurement and Assignment Service and we have the following ruling from him concerning osteopaths:

"Status Osteopaths--do not meet requirements for commission Army, Navy or Governmental agencies in capacity of physicians. Reference Selective Service, their dislocation into military service rests primarily with local induction boards, but if their dislocation depletes community, deferment should be assisted."

A meeting of all state chairmen of the Seventh Corps Area was held in Omaha on April 12, 1942, presided over by Dr. Fouts, Corps Area chairman. At this meeting the main subject for discussion was the determination of designating individual doctors as available or not available for governmental serv-

ice. No definite criterion was established, the final decision being the sole responsibility of each state chairman. It was officially announced that the "questionnaire to end all questionnaires" will be off the governmental presses on April 14. These questionnaires will be mailed to each individual physician directly from Washington and should be answered by the receiving doctor within twenty-four hours, placed in the accompanying franked envelope and returned to Washington. This will constitute an enrollment by the physician with the Procurement and Assignment Service and will be used by this service in selecting physicians for the various governmental agencies. Every physician irrespective of age, color, sex or physical condition should complete the questionnaire and return it to Washington. It was further emphasized by Dr. Seeley that every physician forty-five years of age or younger should attempt to obtain a commission in one or another of the services.

In determining whether a physician should be certified as available or not available, the State Chairman must bear in mind only three factors; first, whether the physician is essential in a teaching capacity; second, if he is a bona fide full time industrial surgeon employed by a war industry; and third, his need in his community. The number of dependents, his popularity in his profession, his possible connection with draft boards or a large practice have absolutely no bearing in the determination of his status. It is well within sound reasoning to assume that the present war will be of long duration, certainly not less than five years insofar as the United States is concerned, and we will have a large force of men under arms that will naturally require the services of a large number of physicians. It is no secret that by January 1, 1943, an additional 16,000 physicians will be required by the Army, Navy and Air forces. Physicians who now desire to apply for commissions in the Army may do so by applying through the headquarters of the Seventh Corps Area at Omaha, Nebraska.

A few words concerning civilian defense are not out of place in this report. We have received numerous letters, perhaps because of our membership on the State Advisory Council, concerning the procurement of supplies to equip first aid posts and casualty stations. The latest information on this comes by way of the press and a letter from Dr. Baehr, medical advisor on civilian defense at Washington. We are sorry to report that federal funds for equipment are earmarked for the so-called target areas only; that means the west coast, the Gulf states, and the eastern industrial centers. I feel that this House of Delegates should go on record urging the State Industrial Defense Council to attempt to obtain federal funds for those centers of industry where defense establishments are active, not only in armament production, but also in processing food products.

In a communication from Lieutenant-Colonel Robert S. Shane, Medical Advisor for Selective Service in Iowa, we received an outline of the plan for re-

habilitation of 1-B selective service registrants in order to make them available for class 1-A. Although nothing was stated as to who should do the work, we assumed that the family physician and dentist would be permitted to do it. We also assumed that the work would be ordered by the local draft boards. A perusal of the fee schedule will convince even the greatest skeptic that it is adequate. I trust that our President, Dr. Bush, our Secretary, Dr. Parker, and Dr. Shaw, chairman of the Medical Economics Committee, all of whom received copies, will comment upon this phase. Lastly, I believe that Colonel Shane will be able to give us a detailed account of the mechanics of the proposed plan.

In closing, I wish to express appreciation to the personnel of the state office for their unstinting assistance in carrying out the work of this committee, and also to the officers and committees of the various county societies for their cooperation.

Mr. Speaker, I move the adoption of the report.

The motion was seconded, put to a vote and carried.

The Speaker: The report of the Committee on Military Affairs, by Dr. E. D. McClean? The report of the Committee on Pneumonia Control, by Dr. Fred M. Smith? A supplementary report of the Committee on Public Relations by Dr. H. E. Stroy?

Dr. Suchomel: Mr. Speaker, you will note in my report that there was a request for somebody to say something about the fee schedule. In adopting that report, you omitted the responsibility.

The Speaker: I think Dr. Suchomel asked Colonel Shane and some of the other gentlemen to comment on the report if they wished to do so at this time. Evidently no one is offering any comments.

Dr. Suchomel: Dr. Shaw is here.

The Speaker: Dr. Shaw, do you want to make any comments on this report?

Dr. Shaw: The only thing I can say is that as Chairman of the Medical Economics Committee I received the list of payments suggested for various rehabilitation matters and was asked to compare it with our medical economics fee schedule to see whether it corresponded, and I agree with Dr. Suchomel that the payments are very adequate. There are very few individuals who would not be perfectly satisfied to take care of all of their private patients on that fee schedule, and if it works as contemplated and authorized by our local board, it seems to me that the compensation will be better than we have ever received from any governmental agency up to this time. Generally speaking, it is a very adequate schedule and I do not think that the medical profession can in any way object to carrying out the rehabilitation work for those payments. However, the matter of authorization has not been well defined as yet.

The Speaker: The supplementary report on Public Relations by Dr. H. E. Stroy. Scientific Exhibits, by Dr. L. M. Overton. Woman's Auxiliary Advisory Committee by Dr. James C. Hill. Are there any supplementary reports of the committees of the Council?

Dr. Hennessy: There is no supplementary report of the Cancer Committee.

The Speaker: The Women's Field Army?

Dr. Reeder: I have the supplementary report of the Industrial Health Committee. The committee has had a meeting since the handbook was published. This industrial survey really applies only to those counties which are industrialized, of which I think there are about sixteen in the state. The survey was planned by our State Department of Health, and it follows the outline which has been approved and suggested by the United States Public Health Service.

The machinery is being set up to go into these plants and make surveys of the health of the employees. The examination will include an x-ray examination of the chest, the Wassermann test, visual and hearing acuity tests, and a check for any other gross impairments. Results will be reported to the employer when it seems best to transfer the worker to some other department where he might be more useful than in the department in which he is working. That is the thought behind the entire picture. Of course, Iowa is not as heavily industrialized as, say, Michigan or Illinois or some of the eastern states, and until recently we have had only four full-time industrial physicians. I just thought of what Dr. Suchomel said. The full-time industrial physicians will probably be exempt from military service, but I do not think that worries us very much because we have only four, one at Burlington, one at Clinton, one here in Des Moines and I believe the John Deere people have one at Waterloo. However, we do have a few part-time physicians.

It is suggested that periodic inspection be made for occupational disease hazards; adoption and maintenance of adequate control measures; provision of first aid and emergency services; prompt and early treatment for all illnesses resulting from occupational exposure; reference to the family physician of individuals with conditions needing attention, cooperating with the patient and his physician in every practical way to remedy the condition; uniform recording of absenteeism due to all types of disability; impartial health appraisals of all workers; provision of rehabilitation services within industry; and the conduct of a beneficial health education program.

The plan for state or local bureaus of industrial hygiene includes consultation with plant management regarding needed corrections of environmental conditions; advice to the management and medical supervisor as to the relative toxicity of materials or processes and advice concerning new materials prior to their introduction into the industry; assistance in developing, maintaining and analyzing absenteeism records; consultant service to medical supervisors, private physicians, compensation authorities and other state agencies regarding illness affecting workers; provision of necessary laboratory service of both a clinical and a physical nature; and integration of the activities of other public health bureaus

in their programs for workers, for example, the control of cancer, syphilis and tuberculosis.

As you can see, this is set up really to protect the private physician or particularly, we will say, the man who is doing compensation work, and there will not be any surveys made in any county which has industries large enough to warrant a survey, I will assure you, without the approval of the county medical society. The president of every county medical society received a letter suggesting that he appoint a committee, which committee will be contacted when the State Department of Health wishes to go into that community or into that factory to make the type of survey we have just outlined.

I move the adoption of this report.

The Speaker: Is there a second?

The motion was seconded, put to a vote and carried.

The Speaker: The report of the Speakers Bureau, Dr. Joseph B. Priestley? The report of the Tuberculosis Committee, Dr. J. C. Painter? Memorials and Communications? Next in order is new business.

Dr. M. C. Hennessy: I have been watching in the newspapers and the magazines and it seems to me that there is a well-organized movement to handle this refugee medical men problem. A few years ago this State Society went on record as approving the action of the State Board of Medical Examiners' policy of issuing licenses to American citizens only. Now with this emergency facing us and with so many of our men going into the military forces, it seems to me that if we let the bars down on these refugees we are defeating our own purposes and the high standards of medical education for which the different organizations have worked; we are going to allow men in here to compete with our doctors on a poorer basis than we are accustomed to having; and it seems to me that that is inimical to the best interests of the men in our profession who will be in the service. Therefore, I should like to move that this House of Delegates go on record as reapproving the stand of the State Board of Medical Examiners and that we also instruct our delegates to the American Medical Association to oppose any move that would lower the bars on the acceptance of refugee physicians.

The motion was seconded, put to a vote and carried.

Dr. J. B. Knipe: The Pocahontas County Medical Society, one of the counties in my councilor district, in discussing the early diagnosis of cancer at its January meeting, felt that the physicians in the rural counties were more or less handicapped in making an early diagnosis due to the fact that laboratory facilities are unavailable to the indigent and underprivileged patient; therefore, it passed a resolution in regard to the situation and asked me, as the councilor of the district, to present it to this body at this time. I will read the resolution for the approval or disapproval of the Society as it may see fit.

"Whereas, There is a need on the part of the patients and a desire on the part of all practicing physicians to include the gross and microscopic ex-

amination of tissue and body fluids for the presence or absence of malignancy in making an early diagnosis of cancer; and

"Whereas, The expense of laboratory study causes the low income groups to hesitate in having such an examination made; and

"Whereas, At the present time the state laboratories are not required to perform this service free; therefore, be it

"RESOLVED, That it is the sense of the House of Delegates of the Iowa State Medical Society, in session assembled, that legislation should be enacted at the next session of the state legislature to correct this condition and that the Committee on Public Policy and Legislation of this Society be instructed to have a bill introduced in the next General Assembly providing free laboratory facilities for the diagnosis of cancer in underprivileged persons and work for its enactment."

I move the adoption of the resolution.

The motion was seconded.

The Speaker: Will we act on this resolution or refer it to the Committee on Public Policy and Legislation?

Dr. Downing: I move as a substitute motion that it be referred to the Committee on Public Policy and Legislation.

The motion was seconded, put to a vote and carried.

Dr. W. R. Brock: This is a very interesting resolution and very important, but we must remember that the University is greatly depleted in its number of assistants. They are cutting the departments clear to the bone, and perhaps this would confer a large responsibility upon them that they cannot meet easily. The fact that we are going to export a great many men out of the state of Iowa for this war does not necessarily mean that the cancer problem will be reduced much in this state, because the people who are leaving are not of the cancer age. I feel sympathetic toward the university in its dilemma right now in having so much work to do with very little help and I think we ought to carry this on very carefully and know what we are doing.

The Speaker: Are there any other comments?

Dr. H. L. Van Winkle: In reply to the statement that there are going to be a number of university laboratory men taken, we know that in the laboratory there are many women who do very excellent work.

Dr. Reeder: The doctor probably doesn't know of the cancer clinics that are being set up over the state. The federal government has provided funds to take care of that set-up, to make tissue examinations for indigent patients. We have clinics in Des Moines, Sioux City, Dubuque, Cedar Rapids, Mason City and Iowa City. They are pretty well distributed geographically.

Dr. Knipe: How do they operate? That is, do you send indigent patients to them?

Dr. Reeder: Patients can be sent to the clinics for diagnosis or the tissue can be sent.

Dr. Knipe: Mr. Speaker, I doubt if the majority of the doctors out in the rural districts are familiar

with that set-up. The point is that in a suspected case of cancer where the people are of limited means they will not pay for a laboratory examination. If you send a piece of tissue to Iowa City for examination it costs you \$5.00. The University will not do it free, and says it is not allowed to. For that reason I think that in all probability many diagnoses of early cancer are missed. Inasmuch as there is provision for free examination of blood for syphilis and tuberculosis it would seem that the laboratory could be instructed and given permission, possibly by legislation, to take care of the biopsies for early cancer. That was the thought of the Pocahontas County Medical Society, and I have talked with numerous physicians in my community and they all feel the same way about it. Of course, the Committee on Public Policy and Legislation must decide whether to seek legislation or not, but I wanted to present the matter to the Society at this time, with the idea of accomplishing something.

The Speaker: Dr. Erskine, have you anything to offer?

Dr. A. W. Erskine: Mr. Speaker, I think this is fully covered in the set-up of the clinics. What district are you in, doctor?

Dr. Knipe: The third district, Emmet county

Dr. Erskine: Is there a cancer clinic in your district?

Dr. Knipe: Not that I know of.

Dr. Erskine: The federal government pays \$3.00 for the examination of tissue. That does not cost anybody anything, not even the county, and it has been the rule in the conduct of the tumor clinics that indigents or semi-indigents from the nearby counties could be referred to the tumor clinic to take advantage of the fact that the federal government would pay the entire cost of the examination of tissue in those clinics. As many of you do not know, before the report of the Committee of Nine, the legal determination of indigency as regards commitment to the University hospital was binding on the state, but it was not binding on the counties. Following the report of the Committee of Nine, the law was amended so that now when a patient meets the legal determination of indigency and cannot be received in the University hospital within thirty days, the law says (and it is mandatory) that the courts shall issue an order to the county board of supervisors directing it to provide adequate care at the expense of the county for that patient, at home or in a hospital. That very important change in the Iowa code has been overlooked by doctors and by judges but it is there, so that an indigent in any county who has gone through the legal process of proving that he is an indigent and has been found eligible for commitment to the University Hospital and cannot be committed, is a direct charge upon the county. It is mandatory. We find the practical result of that law is that in the operation of these tumor clinics it is well for the county boards of supervisors to send these patients through the nearest tumor clinic, because they can save a little more than half of the expense by so doing.

The Speaker: Thank you, Dr. Erskine. Is there any other new business to come before the House? If not, the next order of business is the election of the Committee on Nominations. There are eleven councilor districts, and I hope that you will get together and as soon as you have made your nominations, bring your reports to the Secretary, Dr. Parker. A motion for adjournment is in order.

Upon motion regularly made, seconded and carried, the meeting adjourned at five-fifteen o'clock.

HOUSE OF DELEGATES

Friday Morning, April 17, 1942

The meeting convened at seven forty-five a. m. Dr. Frank P. Winkler, Sibley, President-Elect, presiding.

The Speaker: This morning's session of the House of Delegates will now come to order. We will have the roll call by the Secretary.

The secretary called the roll and the following delegates, alternates and officers were present.

Delegates

Adams.....	C. L. Bain
Allamakee.....	J. W. Thornton
Black Hawk.....	E. E. Magee
Boone.....	A. B. Deering
Bremer.....	L. D. Jay
Buchanan.....	F. F. Agnew
Buena Vista.....	M. A. Armstrong
Butler.....	Bruce Ensley
Calhoun.....	R. G. Hirrichs
Cerro Gordo.....	H. D. Fallows
Cherokee.....	C. F. Obermann
Chickasaw.....	P. E. Gardner
Clarke.....	C. R. Harken
Clinton.....	R. J. Nelson
Decatur.....	G. P. Reed
Des Moines.....	F. G. Ober
Dickinson.....	T. L. Ward
Emmet.....	M. T. Morton
Iowa.....	H. G. Moershel
Jasper.....	J. C. Hill
Johnson.....	E. M. MacEwen
Johnson.....	G. C. Albright
Johnson.....	A. W. Bennett
Lee.....	B. J. Dierker
Linn.....	T. F. Suchomel
Lucas.....	S. L. Throckmorton
Mahaska.....	E. M. Williams
Marshall.....	A. D. Woods
Monroe.....	T. A. Moran
Montgomery.....	W. S. Reiley
Muscatine.....	L. C. Howe
O'Brien.....	W. R. Brock
Polk.....	W. E. Baker
Polk.....	F. W. Fordyce
Polk.....	L. F. Hill
Polk.....	J. B. Priestley
Pottawattamie.....	G. V. Caughlan
Ringgold.....	E. J. Watson
Scott.....	George Braunlich
Story.....	Ernest McFarland
Tama.....	Ira D. Nelson
Union.....	A. F. Watts
Van Buren.....	L. A. Coffin
Wapello.....	C. A. Henry
Webster.....	J. C. Shrader
Winneshiek.....	F. A. Hennessy
Woodbury.....	A. C. Starry
Worth.....	S. S. Westly
Wright.....	R. D. Bernard

Alternates

Appanoose.....	B. B. Parker
Hardin.....	Wm. A. Johnson
Humboldt.....	C. A. Newman
Jackson.....	F. J. Swift
Kossuth.....	W. F. Hamstreet
Linn.....	H. L. Van Winkle
Marion.....	E. C. McClure
Osceola.....	H. B. Paulsen
Palo Alto.....	G. H. Keeney
Warren.....	E. E. Shaw
Wayne.....	C. F. Brubaker

State Society Officers

President-Elect.....	Frank P. Winkler
Secretary.....	Robert L. Parker
Treasurer.....	J. A. Downing
Trustee.....	O. J. Fay
Trustee.....	John I. Marker
Trustee.....	L. R. Woodward
Councilor.....	L. L. Carr
Councilor.....	C. H. Cretzmeyer
Councilor.....	J. B. Knipe
Councilor.....	J. E. Reeder
Councilor.....	E. F. Beeh
Councilor.....	C. W. Ellyson
Councilor.....	H. A. Householder
Councilor.....	C. A. Boice
Councilor.....	R. C. Gutch
Councilor.....	M. C. Hennessy

The Secretary: The roll is called, Mr. Speaker.

The Speaker: We will have the reading of the minutes.

The secretary read the minutes of the meeting of April 15, 1942.

The Speaker: You have heard the reading of the minutes. Are there any correction or deletions? If not, they stand approved as read. The report of the Committee on Nominations.

Dr. Brock: Mr. Speaker and Delegates: I have the honor to report to you the deliberations of the Committee on Nominations, as follows: The Nominating Committee met at ten o'clock with the following members present: F. A. Hennessy of Calmar; H. D. Fallows of Mason City; W. R. Brock of Sheldon; C. F. Obermann of Cherokee; W. E. Baker of Des Moines; E. E. Magee of Waterloo; H. L. Van Winkle of Cedar Rapids; B. J. Dierker of Fort Madison; E. M. Williams of Oskaloosa; A. Fred Watts of Creston; and G. V. Caughlan of Council Bluffs. Dr. Brock was named chairman and Dr. Obermann secretary. After due consideration, the committee makes the following nominations for the vote of the House of Delegates:

President-Elect: Dr. M. C. Hennessy, Council Bluffs; Dr. J. G. Macrae, Creston; Dr. L. R. Woodward, Mason City.

First Vice President: Dr. Walter A. Sternberg, Mount Pleasant.

Second Vice President: Dr. Walter D. Abbott, Des Moines.

Secretary: Dr. Robert L. Parker, Des Moines.

Treasurer: Dr. James A. Downing, Des Moines.

Trustee: Dr. John I. Marker, Davenport.

Councilors: First District, L. L. Carr, West Union; Sixth District, James C. Hill, Newton; Seventh District, Sydner D. Maiden, Council Bluffs.

Delegates to the American Medical Association:

T. F. Thornton, Waterloo; A. D. Woods, State Center.

Alternates to the American Medical Association: John H. Peck, Oakdale; George Braunlich, Davenport.

Dr. Boice: I move the acceptance of the report of the committee.

The motion was seconded, put to a vote and carried.

The Speaker: Dr. Brock, Dr. Boice and Dr. McClure will serve as tellers. Is there a desire on the part of this body to offer any nominations from the floor?

The Secretary: I will now announce the registration. There are 49 delegates, 11 alternates and 16 officers, making a total of 76. If any delegate or officer has come in since the roll call, will he please report?

The tellers distributed ballots, collected and counted them. The result did not give the necessary majority to any candidate for president-elect.

Dr. Hennessy: I move the by-laws be suspended and the secretary be instructed to cast the unanimous ballot of the House for Dr. Woodward.

The motion was seconded, put to a vote and carried.

The Speaker: I declare Dr. Woodward President-Elect of the Iowa State Medical Society.

Dr. Suchomel: I move that the by-laws be suspended and the secretary be instructed to cast the unanimous ballot of the House of Delegates for the balance of the candidates submitted by the Nominating Committee.

The motion was seconded, put to a vote and carried.

Dr. Woodward: Inasmuch as I hold the office of trustee at the present time and it is not proper to hold two offices, I wish to resign as trustee.

The Speaker: Is it necessary to have that in writing?

The Secretary: No, Mr. Speaker, the vote of the House has not yet been cast by the secretary. I so cast it. You may declare them elected.

The Speaker: I declare the rest of the nominees elected.

Dr. Suchomel: Mr. Speaker, I move that the resignation of Dr. Woodward as trustee be accepted.

The motion was seconded, put to a vote and carried.

Dr. Brock: Mr. Speaker, I request the Nominating Committee to move to Parlor A where we can deliberate upon the nominee.

Dr. Suchomel: While we are waiting for the report of the Nominating Committee, I move that the next annual session be held in the city of Des Moines.

The motion was seconded, put to a vote and carried.

Dr. Boice: Mr. Speaker, I move that the time of the meeting of the 1943 session be left to the discretion of the Committee on Arrangements.

The motion was seconded, put to a vote and carried.

The Speaker: Until the report of the Nominating Committee we will proceed with the next order of business, namely, that of the reports of committees. I think there are one or two committees who have reports this morning.

Dr. Bernard: Mr. Speaker, the Committee on

Public Policy and Legislation begs to submit the following report.

Inasmuch as the Code of Iowa, Section 3828 (1939) Chapter 189.7, provides for pathologic diagnosis and complete care in the established tumor clinics for indigents who cannot be committed to the University Hospitals at Iowa City, and inasmuch as federal funds are available for this diagnosis and care, your Committee on Public Policy and Legislation recommends that the motion submitted by Dr. J. B. Knipe of Armstrong be laid on the table.

R. D. Bernard, M.D., Chairman
A. L. Jenks, M.D.
L. A. Coffin, M.D.

Dr. Bernard: *I move that the report be accepted.*

The motion was seconded, put to a vote and carried.

The Speaker: May we now have the report of the Nominating Committee?

Dr. Brock: Mr. Speaker, the Nominating Committee has nominated Dr. M. C. Hennessy of Council Bluffs for the office of trustee. *I move the report be accepted.*

The motion was seconded, put to a vote and carried.

Colonel Marker: Mr. Speaker, I believe we should elect Dr. Hennessy now. *I move that the secretary be instructed to cast the unanimous ballot for Dr. Hennessy for trustee for the unexpired term of Dr. Woodward.*

The motion was seconded, put to a vote and carried.

The Secretary: Mr. Speaker, the vote of the secretary is cast.

The Speaker: I declare Dr. M. C. Hennessy of Council Bluffs, elected to the Board of Trustees. Are there any further committee reports?

The Secretary: We have the report from the Baldridge-Beye Memorial Committee this morning and one essay has been submitted. What is your pleasure? *I move that the report be accepted.*

The motion was seconded, put to a vote and carried.

The Speaker: If there are no further committee reports, we will proceed to unfinished business. Mr. Secretary, is there any unfinished business?

The Secretary: The secretary has none on his desk.

The Speaker: Next in order is new business.

Dr. Boice: The Council at its meeting on April 16, 1942, gave serious consideration to the welfare of the Iowa State Medical Society during the period of the present war and it was its unanimous opinion that the Program Committee should be advised that the Council believes it to be to the best interest of the Society that certain changes be made in the present form of program. Therefore, the Council recommends, first, that the program of the Eye, Ear, Nose and Throat Section be limited to one day—Thursday; second, that the number of out-of-state guest speakers be limited to four; and third, that for the duration of the war the period of the annual session be limited to two days, and the House of Delegates be called for the election of officers and transaction of business at four p. m. on the second day. In consideration of this resolution, the Council asks the unanimous consent of the House of Dele-

gates for a suspension of the by-laws to make this action possible.

Dr. Boice: Mr. Speaker, I move the acceptance of this report.

The motion was seconded.

The Speaker: It has been moved and seconded. Are there any further remarks?

Dr. Hennessy: I believe you provide for only one session of the House of Delegates or are you providing for the session on the first day and then for the second session, the Friday morning session?

Dr. Boice: The first session is set by the by-laws for the first day. The other is set for the third day. We are just changing the third day session.

Dr. Hennessy: You are just changing the third day session by having it on the second day?

The Speaker: Any further discussion? You have heard Dr. Boice's motion. It has been seconded. All in favor say "aye"; contrary "no". *The motion is carried unanimously.* Any further new business? If not, the next order of business is the announcement of the appointment of committees.

Dr. Fay: This may be slightly out of order, but Colonel Marker has an important message and he would like to have the privilege of the floor for about five minutes. *I move that he be given the opportunity to speak at this time.*

The motion was seconded, put to a vote and carried.

Colonel Marker: Mr. Speaker, I want to take just a few minutes to tell you that we need officers in the army, and to back up my statement I want to read you a message which we had the first of the week from our corps area surgeon, telling us how men can get into the army. About a year ago, or a little more, some of us got into the army because we had been in the Reserve Corps for a long period of time. When I went in I kept saying "I think it is a useless thing to do. I don't believe that anyone ever will attack us." I likewise did not think it was possible. The seventh of December came and they did attack us. Then I started in saying to myself that it was possible, they had attacked us, but it wasn't possible for them to make any great impression on us. However, they did make a great impression on us and many of the places that we thought were strongholds have now fallen to Japan. The United States is in a precarious position, and I am telling you that, not officially, but as a private observer and a man who is one of you.

Because we do need men and because the army is rapidly expanding, the work devolving upon the men who are already in service is very heavy. It has been more than four months now since we were attacked and many of the things that we said couldn't be done have been done, and to some of us it begins to look as if the United States could get into a pretty serious condition. I don't think that Des Moines will be bombed very soon, but I have quit saying that it can't be done. At first I thought it wouldn't be done, then I thought it couldn't be done, and now I think all things are possible.

I do not believe that the American people have awakened yet to the danger we are in. As the army expands, more medical officers are needed. In the fourteen months I have been in the service, I have examined officers for the various services every day and I haven't seen any papers for a medical man who was not a reserve officer on December 7. That means that we are getting no appointments to the army of the United States, which is where men receive commissions now, and I know that it is becoming a matter of serious concern. We asked for thirteen additional officers about the first of January. We haven't received one of them yet. Instead, officers are taken from us. I go down and tell the men to whom I must report that we cannot get along without another officer and still they take them. Yesterday two of our men left us, that is, they were designated to leave. The orders as to where they go have not yet come through. They just said, "Two men for desert service." That is what is happening to the men we have. There are no replacements. With a hospital of about 1,300 beds capacity and about 700 to 800 patients from the medical service, I feel there is a distinct need for physicians. The men who say that the difficulty lies some place in the red tape, now have a chance to break that red tape, if they want to. This letter came the other day from Colonel Gibner who is our Corps Area Surgeon at Omaha:

"With a view to expediting the procurement of medical officers, the Surgeon General has directed that as many qualified physicians as possible be contacted and that this office process their completed application forms and accompanying papers through to his office, which will then clear the applicant through the Procurement and Assignment Agency.

"It is desired" (and this came to all of the officers of the organization) "that you request the medical department officers on duty at your station to contact by mail or otherwise physicians known to them whom they believe would be qualified for commission in the medical corps of the United States, either for general or for limited military service, and request those who wish to apply for commissions to make request by letter to the surgeon's headquarters, Seventh Corps Area, Federal Building, Omaha, Nebraska. On receipt of such letters, this office will send the applicant a set of the necessary forms and instructions regarding completion of same. Applications may be forwarded from individuals who have enrolled with the Procurement and Assignment Agency provided they have not sent in their blank forms to that agency. The above applies to applicants for the medical corps only."

This should keep any man who is able to stand on his two feet from saying "They don't want me and the red tape is keeping me from getting in." The restrictions have been taken off, so that men we were turning down a year ago are accepted today, and we are certifying men for limited service who previously couldn't be taken when it was a program of preparation. Those men have an opportunity to get in now.

The medical men and the people of the United States are going to have to take this war seriously, because it is going to be a serious war; it is going to be a long war and I am not giving away any military secrets when I tell you that. I think you know it, and yet I believe the applications are coming in too slowly. I wish everyone of you would make a note to write the surgeon of the Seventh Corps Area (make a note of the address, which is the Federal Building at Omaha, Nebraska) telling him of your situation, your willingness to serve, your ability to serve, and asking for papers. This is in addition to what is being done by our Procurement and Assignment Service, which we know is doing good work, but we are not getting medical officers as fast as the army needs them.

Dr. Suchomel: Mr. Speaker, I should like to comment on Colonel Marker's remarks. If all states are clearing as many as the state of Iowa, there should be at least 6,000 applications ready for commissions by this time. Since February 1 I have cleared 154 physicians as available from Iowa. I don't know what has happened to them.

Dr. C. W. Elyson: I should like to ask one question regarding the blanks that were to be mailed to the physicians on April 14 of which Dr. Suchomel spoke. Which would have preference, the papers to Omaha that Dr. Marker suggests or the procurement blanks that are to come out on the fourteenth?

Dr. Suchomel: I understand that all applications will clear through Procurement and Assignment first, so those who have not sent to the Procurement and Assignment may send right through the Corps Area.

Dr. Shaw: Is the restriction the same as it was a month ago, so that this call for men is only for men under thirty-six years of age?

Colonel Marker: It does not apply to any particular age. I would say that any man under fifty years of age should be able to get in and serve if he wants to serve. Some may be older than that if they have had previous service.

Dr. G. H. Keeney: I should like to ask a question. Don't you think it would be a good plan for the Procurement and Assignment Service to ask all doctors under the age of fifty years to have their physical examination at once, so that the Service will know what men can be assigned and just how we in Iowa stand on medical service in the army? Do you feel that that would be wise?

Colonel Marker: Mr. Speaker, I think that would be a wise move, for one reason: It would call the attention of the men to the necessity for getting out and serving.

Dr. M. C. Hennessy: There seems to be a bottleneck some place that we aren't able to correct. I heard your remarks here this morning and I heard the Major's talk last night. He talked as you do, but in my community we have men who applied immediately after Pearl Harbor and they are still up in the air. They have received no information as to when or whether they are to go. Some of them have taken their examinations. They expect to get commissions and to be called, and they have partially made arrangements to leave but they don't

hear anything. Can anybody put his finger on where the delay is?

Colonel Marker: This may be a solution to what you call a bottleneck, because previously all applications had been going through the Surgeon General's office. Now they will go in through nine different corps areas, and we will at least have less of a bottleneck than we had previously. This letter from the Surgeon General is dated April 11. I received it the first of the week. I think the War Department is beginning to find that it is too big a job to send all applications through one particular place. I think this will relieve the bottleneck. It will give the doctor an opportunity to make application for service, and knowing Colonel Gibner and his office, I know there will be examinations made and action taken. I am going to tell him of this talk, because he asked that we do this.

The Secretary: Mr. Speaker, I happen to be a member of the Seventh Corps Area Committee, and I know that we had instructions about ten days ago about applying directly to the corps areas. Now I sincerely hope that most of you men will wait and hear Dr. Fouts speak on this subject this morning because he is chairman of this Seventh Corps Area Committee. I have been asked a number of times about men getting in the service. A man does not have to wait to hear from the Procurement and Assignment Service. He can apply directly to the Seventh Corps Area Surgeon and the papers will go through. He can have his examination at once.

The Speaker: Is there any further new business to come before the house?

Colonel Shane: Gentlemen, modesty is one of my many virtues as you all know. I understood, after I decided to take a little air from this meeting, that you wanted to hear about the rehabilitation program, and I should like to touch on that for just a moment. The rehabilitation program has been established in Maryland and Virginia as a trial, and when it is started in Iowa, probably at an early date, a registrant will be called in to his local board. There he will meet his local board physician or dentist who will tell him that he has a defect which can be remedied and will explain to him that as soon as it is remedied, he will be placed on active duty. He will be asked if he desires to have this done and if he says he does, he will be asked to designate the physician to whom he desires to go and then the usual paper work will be done. If he does not desire to have it done, he will sign a statement to that effect which will be sent to our headquarters at Washington. When that comes back, if it is approved by the national director, he will go on active duty with his defects waived.

I have seen only the dental approved list in Washington so far, but any man who does this rehabilitation work, which will be paid for by the government, will be paid a very fair rate. Down east they think it is too cheap but at the meeting of the chairmen of the medical advisory boards in the Seventh Corps Area some of the doctors thought it was slightly high. However, to do this rehabilitation work, a man must be a member of his county, state

and national societies, which also applies to dentists.

If a man wishes to have work done and does not have any particular doctor or dentist, the local board has a list of approved physicians in the county, and they will be called in rotation provided they are qualified to correct the defect. The board will rotate the calls until every doctor is given his turn. However, the registrant has a right to select his own physician, provided he is on the approved list of doctors or dentists.

Dr. Boice: This work is paid for by government appropriations?

Colonel Shane: The fee is paid by the government. For instance, they pay up to \$10.00 to cure a case of itch. I would like to cure cases of itch the rest of my life for \$10.00.

Dr. Van Winkle: What is the machinery for rendering bills?

Colonel Shane: The registrant will be sent to you. You will look over his defects and you will estimate the hospital care and the time it will take. At present we are working only on defects that can be corrected in about thirty days. Hernia is not on the list of defects which we intend to remedy at present. You make an estimate of the bill. The estimate is sent to the local board of physicians or dentists as the case may be, and then to us. If we find it is within the maximum limit, we send the registrant to you, you do the work, and the bill is paid by our office here in Des Moines.

Dr. Van Winkle: The bill is sent through the Selective Service Board?

Colonel Shane: Yes, sir.

Dr. Hennessy: Is every member of a county society on the approved list?

Colonel Shane: There may be some instances where a man has caused a lot of trouble, and he might not be on the approved list, even if he belongs, but as a rule it is true that every member is approved.

Dr. Reeder: Are they not supposed to use government facilities when they are close by?

Colonel Shane: Government hospitals are full.

Dr. Boice: Has the hospital rate been set?

Colonel Shane: It is \$10.00 for a hospital room and \$3.00 a day, I believe.

Dr. Downing: This applies only to draft men?

Colonel Shane: Yes, sir. You understand, gentlemen, that the selective service is a group of civilians. The only army personnel is the group at state headquarters. The rest are civilians and they run it like civilians, except when it comes to paper work. Then you are back in the army again.

Dr. Downing: Mr. Speaker, may I move that Colonel Shane put this in five-cent words and have it published in the Journal.

The motion was seconded, put to a vote and carried.

The Speaker: I believe that Dr. Woodward has a report on the scientific exhibits.

Dr. Woodward: A committee composed of myself, Dr. Peck and Dr. Glomset studied the exhibits and decided that the exhibit of Dr. McNamara is the best contribution to true scientific medicine. We think it is sterling work and represents a great deal

of very careful, scientific effort. We think that the first award should go to Dr. McNamara. We are all very much interested in the work of Dr. Ash on the treatment of alcoholism. Maybe I was particularly vulnerable to that exhibit, but if his therapy will cure alcoholics it is a real contribution. We think that Dr. Ash's work is worthy of honorable mention. We particularly enjoyed looking at Dr. Weingart's slides. He has done some beautiful work and we think he should have honorable mention, too. The other exhibits are very interesting and the section is a worthwhile endeavor. I move the acceptance of this report.

The motion was seconded, put to a vote and carried.

The Speaker: Next in order is the announcement of committees, Mr. Secretary.

The secretary read the announcement of committee appointments as follows:

Standing Committees of the House of Delegates

CONSTITUTION AND BY-LAWS

John H. Henkin.....	Sioux City
W. L. Alcorn.....	Washington
Bush Houston	Nevada

FINANCE

E. C. McClure.....	Bussey
H. A. Tolliver.....	Charles City
A. S. Bowers.....	Orient

MEDICAL ECONOMICS

E. E. Shaw.....	Indianola
T. F. Thornton.....	Waterloo
B. B. Parker.....	Centerville
H. M. Ivins.....	Cedar Rapids
C. T. Maxwell.....	Sioux City

MEDICAL EDUCATION AND HOSPITALS

Jack V. Treynor.....	Council Bluffs
John H. Randall.....	Iowa City
Con R. Harken.....	Osceola

MEDICOLEGAL

Frank A. Ely.....	Des Moines
George C. Albright.....	Iowa City
L. C. Kern.....	Waverly

PUBLIC POLICY AND LEGISLATION

R. D. Bernard.....	Clarion
L. A. Coffin.....	Farmington
A. L. Jenks.....	Des Moines
F. P. Winkler.....	Sibley
Robert L. Parker.....	Des Moines

Special Committees of the House of Delegates

BALDRIDGE-BEYE

Willis M. Fowler.....	Iowa City
O. H. Banton.....	Charles City
M. G. Bourne.....	Algona

FRACTURE

D. C. Conzett.....	Dubuque
A. F. O'Donoghue.....	Sioux City
F. L. Knowles.....	Fort Dodge
L. M. Overton.....	Des Moines
D. N. Gibson.....	Des Moines
K. R. Werndorf.....	Council Bluffs
W. G. Bessmer.....	Davenport

HISTORICAL

W. L. Bierring.....	Des Moines
J. T. McClintock.....	Iowa City
Frank M. Fuller.....	Keokuk
H. G. Langworthy.....	Dubuque
P. E. Gardner.....	New Hampton

MATERNAL AND CHILD HEALTH

H. E. Farnsworth.....	Storm Lake
R. H. McBride.....	Sioux City
E. D. Plass.....	Iowa City
H. A. Weis.....	Davenport
C. P. Phillips.....	Muscatine
Lee F. Hill.....	Des Moines
J. F. Gerken.....	Waterloo

PROCUREMENT AND ASSIGNMENT

T. F. Suchomel.....	Cedar Rapids
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MEDICAL LIBRARY

A. J. Joynt.....	Waterloo
Jeannette Dean-Throckmorton.....	Des Moines
W. S. Greenleaf.....	Atlantic

MILITARY AFFAIRS

Charles T. Maxwell.....	Sioux City
L. L. Leighton.....	Fort Dodge
F. G. Murray.....	Cedar Rapids

PNEUMONIA CONTROL

Fred M. Smith.....	Iowa City
Dennis H. Kelly.....	Des Moines
B. F. Wolverton.....	Cedar Rapids
H. W. Rathe.....	Waverly
A. A. Schultz.....	Fort Dodge
Carl F. Jordan.....	Des Moines

PUBLIC RELATIONS

H. E. Stroy.....	Osceola
C. C. Collester.....	Spencer
L. D. James.....	Fairfield

SCIENTIFIC EXHIBITS

L. M. Overton.....	Des Moines
R. F. Birge.....	Des Moines
W. H. Longworth.....	Boone

WOMAN'S AUXILIARY ADVISORY

James C. Hill.....	Newton
E. A. Hanske.....	Bellevue
John G. de Bey.....	Orange City
C. B. Hickenlooper.....	Winterset

Section Chairmen for 1943 Meeting

Medical: M. T. Morton, Estherville.

Surgical: W. R. Brock, Sheldon.

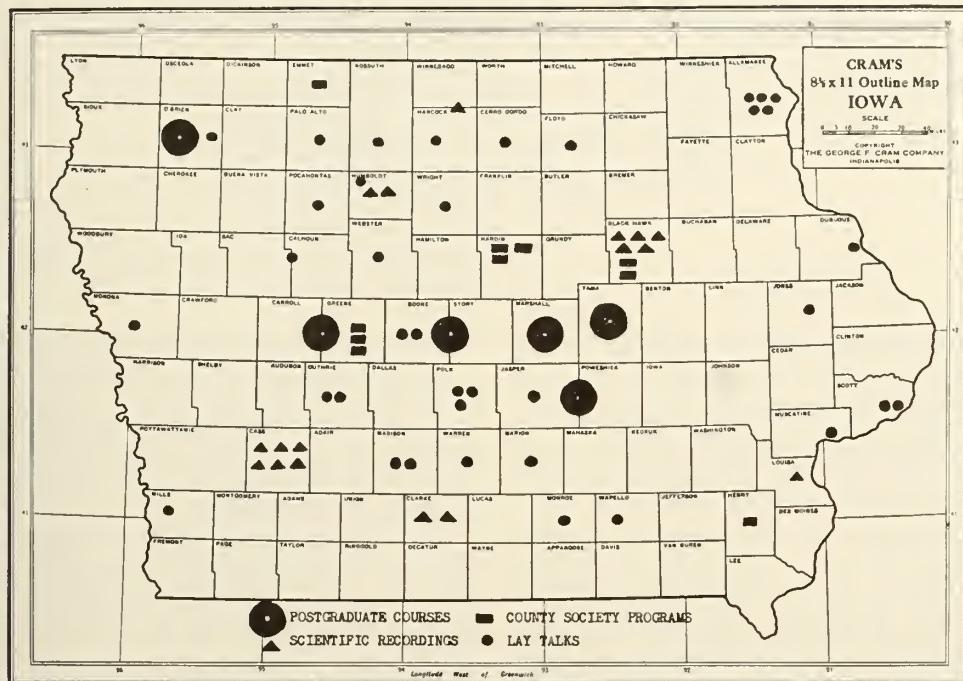
Eye, Ear, Nose and Throat: J. C. Decker, Sioux City.

The Secretary: I move, Mr. Speaker, that the appointment of these committees be approved by this house.

The motion was seconded, put to a vote and carried.

There was no further business and upon motion regularly made, seconded and carried, the meeting adjourned at eighty fifty-five o'clock.

SPEAKERS BUREAU ACTIVITIES



SPEAKERS BUREAU ACTIVITIES—FIRST SIX MONTHS OF 1942

The following map indicates the activities and accomplishments of the Speakers Bureau during the first half of this year. Six postgraduate medical courses have been conducted during this time, four of which will continue during the fall months. While many of the physicians throughout the state have gone into service, the attendance at these meetings has been especially good in most instances. You will note that the Bureau has presented talks to twenty-seven medical societies so far this year, seventeen of which were scientific transcriptions and ten personally delivered by various members of the State Society. In addition, thirty-seven medical talks were given before lay organizations in the state. Another activity, which is not recorded on this map, is that of the weekly radio talks over Stations WOI and WSUI. These have been broadcast each week and 759 manuscripts have been mailed out in response to requests received.

The Bureau is now arranging fall postgraduate medical courses. Interested societies should write to the central office at 505 Bankers Trust Building, Des Moines, Iowa, immediately.

HARDIN COUNTY POSTGRADUATE MEDICAL COURSE

The Hardin County Medical Society, in cooperation with the Speakers Bureau, plans to conduct a series of monthly postgraduate medical lectures to be held alternately in Iowa Falls and Eldora. The last Tuesday of each month has been designated as the meeting date, and the opening lecture is to be presented in Eldora, Tuesday, July 28. Cards announcing the subject and speaker will be mailed to the physicians in this locality prior to that time.

RADIO SCHEDULE

WSUI—Wednesdays at 10:00 a. m.

WOI—Wednesdays at 2:05 p. m.

- | | | |
|---------|--------------------------------|-------------------------|
| July 1 | Heat Exhaustion and Sun Stroke | L. L. Davidson, M.D. |
| July 8 | Preventable Diseases | C. F. Jordan, M.D. |
| July 15 | Automobile Accidents | A. R. Lauer, Ph.D. |
| July 22 | Poliomyelitis | D. C. Wirtz, M.D. |
| July 29 | Child Psychology | H. Max Houtchens, Ph.D. |

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF JULY

Atlantic Atlantic Hospital 6:00 p. m.	July 9	The Making of a Diagnosis David P. Barr, M.D., St. Louis
Corydon Eleanor Tea Room 8:00 p. m.	July 14	Office Gynecology Joseph L. Baer, M.D., Chicago

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee, Dexter, Iowa*

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

THE PRESIDENT'S MESSAGE

With a deep sense of appreciation of the honor conferred upon me I am nonetheless aware of the responsibility conscientious leadership incurs. I will aim to uphold the high standards of this Auxiliary insofar as it is within my power to do so.

Our organization is without parallel in its opportunity to serve the medical profession whose members have pledged their wholehearted support and services to the government. We can do no less. Never in the history of the Woman's Auxiliary have its members been called upon for greater service than at present. Our slogan has been "Every Doctors' Wife in Health Defense". A program of health, if it is to prove beneficial to our people, must have medical leadership. We are facing critical times for which we need strength and unity of purpose.

With your confidence in me and with my faith in you who make up our Auxiliary, I look forward to a year characterized by service and progress.

Mrs. F. W. Mulsow, President

REPORT OF THE COMMITTEE ON HYGEIA

At the beginning of the year letters with a copy of the *Hygeia* program were sent to all county chairmen and to each member of the state committee. We stressed the need of recognizing the promotion and distribution of *Hygeia* as one of the most important activities of the Auxiliary.

Some auxiliaries, as well as individual members, have given *Hygeia* subscriptions to public schools and libraries. As in former years, *Hygeia* was the source of reference material used by those competing in the Health Essay contest. One of the seven counties receiving *Hygeia* credits last year is not on the list this year but two have been added making a total of eight out of the nineteen organized counties. Dubuque County having again gone over its quota is once more on the honor roll. The auxiliaries in Dallas and Guthrie counties have given two-year subscriptions to ten schools, thus gaining 38 credits. The total credits for the state numbered 127.

We express our thanks to Mr. Frank V. Cargill for sending the material used in the *Hygeia* exhibit at our state meeting.

Mrs. H. F. Clark, Chairman

Reports of County Auxiliary Presidents

Cass County

The Woman's Auxiliary to the Cass County Medical Society meets once a month when the doctors have their meetings. Members have dinner with the doctors and then separate for their own special programs. There are fourteen members. The State Auxiliary program has been found useful at the meetings and many of the State Auxiliary's objectives have been carried out. Among the Cass County Auxiliary's achievements were the donating of five dollars to the State Nurses Loan Fund and the donating of five dollars to the Red Cross. *Hygeia* was placed in the City Hall rest room this year, and the health essay contest was sponsored by the schools. Members of the auxiliary have been serving at the Red Cross rooms once a month, and have been active in all phases of the Red Cross Civilian Defense by attending classes of first aid, home nursing and nutrition and canteen. One member (Mrs. Earl C. Montgomery) is county nutrition and canteen chair-

man, and first aid instructor. The Auxiliary expects to sponsor a "gray ladies" organization in Atlantic.

There has been close cooperation with the nurses, and nurses are often invited as guests at the meetings, the hospital superintendent having given several good talks. The meeting, which was the highlight of the year, was the luncheon at which Mrs. Hornaday (our state president) was guest of honor this spring.

Mrs. Earl C. Montgomery, President

Dallas-Guthrie Auxiliary

The Dallas-Guthrie Auxiliary is an organization of thirty members. We have four business meetings a year and they occur in January, April, July and October at the same time of the county medical society meetings. The Auxiliary, however, has its own program with a health talk at each meeting, either by one of our own members or by a member of the medical society. In planning our program for the

year we try to follow the outline suggested by both the national and state organizations.

At the October meeting in Panora we had the privilege of entertaining the state president, Mrs. W. R. Hornaday. She gave a most interesting talk and outlined her plans for the year.

In addition to the regular business meetings we have a social meeting once each month, with the exception of July and August. These are bridge dinners at which time we entertain our husbands, the parties being held in the various towns of the two counties. They are well attended with an average of from thirty-five to forty members and guests present.

Our members are all active in civic organizations such as Women's Clubs, Parent-Teacher Associations, etc., and cooperate in providing speakers on health subjects for these lay groups. Most of the members also take an active part in community projects such as tuberculosis and cancer control and Red Cross. They place a great many subscriptions to *Hygeia* in their local schools and libraries. A number of them subscribe to the *National Bulletin*.

As an organization we contribute to the health essay contest and have voted to cooperate and give financial support to the State Auxiliary projects.

Mrs. C. A. Nicoll, President

Dubuque County

The Woman's Auxiliary to the Dubuque County Medical Society held five meetings for the year 1941-1942. Our membership was increased from 28 to 31. Our projects for the year were securing thirty one-year and one two-year subscriptions to *Hygeia*; sponsoring a speaker on a health subject, in cooperation with the local Parent-Teacher Association; forming a first aid class of thirty members; and giving money to the Red Cross for sewing supplies and to the Elks and Knights of Columbus for Christmas baskets. Our members have joined nutrition classes and are very active in the Visiting Nurses Association, cancer control, the Christmas Seal sale, Girl Scouts and other groups. One of our members is a very active president of the Parent-Teacher Association of a junior high school. We published a series of articles on pre-school examinations for the Dubuque County Public Health Nursing Service, and Miss Lorenz, the county nurse, reported very satisfactory results from this effort.

We have had three sewing centers and made the following articles for the Red Cross; three complete layettes, ten blankets, fourteen dresses, two hoods, twenty-five shirts, two robes, twelve men's pajamas; and we have knitted twenty sweaters, eight shawls and three pairs of socks. Under the able leadership of Mrs. Moes we have had a very happy and busy year.

Mrs. H. M. Pahlas, Secretary

Greene County

We organized a year ago at this time. The members decided they would like to get acquainted dur-

ing the first year rather than carry out any program. We have more definite plans for the coming year. At our last business meeting we elected officers and decided to meet monthly at the same hour our husbands were attending their county society meetings. A six-thirty dinner and an interesting roll call are the main features of our program. The roll calls are to be on nutrition, first aid or an item of interest. We expect many interesting discussions to follow them.

Mrs. Phillips E. Lohr, President

Jackson County

The Woman's Auxiliary to the Jackson County Medical Society was organized June 30, 1930. We are a small organization and the members are quite a distance apart so we only meet when the doctors have their meetings, four times a year, but we enjoy very much the sociabilities these meetings bring and we feel the need of such. We are always glad to have others visit with us. Our June meeting held at Bellevue is always very enjoyable and attended by quite a few guests. We always try to have a book review at our meetings.

Last summer Mrs. Hanske, our worthy state past president, very graciously entertained at a luncheon followed by bridge and the members of several auxiliaries in attendance reported a very pleasant afternoon. Members recently had the privilege of attending a luncheon with the Dubuque County Auxiliary at the Julien Hotel in Dubuque and listening to our state president, Mrs. Hornaday, who presented a very enjoyable and instructive talk.

We have thirteen paid memberships this year; three subscriptions to *Hygeia* were made through our auxiliary; and we subscribed \$2.50 toward the health essay contest. Mrs. John W. Jordan, President

Madison County

We have a membership of eight which includes the wives of every doctor in the county. There have been five meetings during the past year. At our first meeting our president, Mrs. Veltman, appointed a committee to compile a history of all Madison county doctors and to keep a scrapbook of all clippings pertaining to the medical society or the auxiliary.

One meeting was held with the doctors who had secured a guest speaker. The subject of the talk was "Sanitation". We have also done some study along the line of nutrition. One of our members gave an interesting paper on "Current Medical Legislation", which was followed by a general discussion. The Auxiliary also went on record as approving the motion made by the Executive Board whereby the auxiliaries sponsor an educational loan fund for upper class student nurses in any recognized training school in Iowa.

We have provided speakers for Parent-Teacher Association meetings, taken an active part in Red Cross work and community projects and have been actively interested in the Boy and Girl Scout work.

The Auxiliary has placed *Hygeia* in two schools in Madison county. A Winterset high school student entered the health essay contest and received honorable mention.

Mrs. Paul Chesnut, Secretary

Polk County

The Woman's Auxiliary to the Polk County Medical Society held the following meetings during 1941-1942: March 25 at Wakonda Club; May 27, a tea at the home of Mrs. Lee Forrest Hill; October 29, a bridge at the Commodore Hotel; November 16, a luncheon at the Hotel Fort Des Moines, honoring Mrs. Mosiman, the National President; December 2, dinner, bridge and dancing at Wakonda Club, with our husbands as guests; and January 27, the annual meeting and election of officers at Younkers Tea Room. Doctors' wives from the Army Post and Veterans Hospital are invited to each meeting.

In a meeting with the superintendents of the four hospitals in Des Moines last fall, we found many ways in which we could cooperate with them. The most important part of the discussion concerned the Nurses Loan Fund. The next was a plea for help in recreation for nurses. Plans were completed to have dances at the Fort, when "Jap Sunday" turned everything topsy turvy. We are proud to be the first county to donate to the Loan Fund. Because of our size we should give proportionately higher amounts than other counties, and many women plan to give small bridge benefits to add to the fund. Several parties have already been given.

Mrs. W. W. Bond, President

Woodbury County

The Sioux Med-Dames, the Woman's Auxiliary to the Woodbury County Medical Society, held four regular meetings during 1941-1942. Mrs. L. R. Tripp opened her home for a breakfast in June. The September meeting was a tea at the home of Mrs. W. E. Cody. Our annual Christmas luncheon was held at the Martin Hotel. It was our privilege to have the wives of the out-of-town members of the Sioux Valley Medical Association as our guests at this luncheon. They were also entertained at a bridge-tea the day preceding. The customary silver offering for some charitable organization was taken. This year it was sent to the Mary Elizabeth Day Nursery. Mrs. W. Z. Earl was our hostess at a tea in March. The following officers were elected at this meeting: Mrs. L. R. Tripp, president; Mrs. J. W. Schwartz, vice president; Mrs. Leo Wilson, secretary; and Mrs. C. R. Watkin, treasurer.

With the splendid cooperation of our members a most successful campaign for enlistments in the Women's Field Army of the American Society for the Control of Cancer was conducted. More than \$600.00 was subscribed. The State Nurses Association held its convention in our city in September. They were entertained at a tea by the Woodbury County Medical Society at which the Sioux Med-Dames served as hostesses. Individual members

have given generously of their time to the Bundles for Britain and the Red Cross. A cash donation was given to the Bundles for Britain by the organization. I am sure that every member responded to the annual roll call of the Red Cross. One of our members, Mrs. L. E. Pierson, has given unstintingly of her time to the Red Cross and is an instructor for a class in nurses' aide. She is also chairman of the 1942 enlistment campaign. Several of our members are serving on the boards of our charitable organizations, Girl Scouts and Parent-Teacher Associations.

Mrs. A. H. Hendrickson, President

Worth County

The Woman's Auxiliary to the Worth County Medical Society is not quite a year old, but we have had joint sessions with the Northwood and Manly chapters of the Eastern Star, and we took charge of a dinner honoring Dr. C. A. Hurd of Northwood. The president visited every school in the county and presented literature to the superintendents for the health essay contest. We are all working on the cancer campaign for the Women's Field Army.

Mrs. S. S. Westly, President

Dallas-Guthrie Auxiliary

Members of the Woman's Auxiliary to the Dallas-Guthrie Medical Society met Thursday, April 9, at Panora, with the president, Mrs. C. A. Nicoll of Panora, presiding. A twelve-thirty dinner was enjoyed with the husbands, after which each group held its own meetings. The secretary, Mrs. R. I. McGilvra, having moved away, Mrs. M. H. Brinker of Yale, was chosen to be secretary for the balance of the year. Mrs. C. E. Porter of Redfield had charge of the program and gave a very interesting paper on nutrition, which was followed by a discussion period. Members of the Auxiliary entertained their husbands at a dinner-bridge in Dexter April 30, with Dr. and Mrs. C. A. Osborn and Dr. and Mrs. Keith Chapler as hosts. Mrs. M. H. Brinker, Secretary

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Wednesdays at 10:00 a. m.
WOI—Wednesdays at 2:05 p. m.
July 1 Heat Exhaustion and Sun Stroke L. L. Davidson, M.D.
July 8 Preventable Diseases C. F. Jordan, M.D.
July 15 Automobile Accidents A. R. Lauer, Ph.D.
July 22 Poliomyelitis D. C. Wirtz, M.D.
July 29 Child Psychology H. Max Houtchens, Ph.D.

SOCIETY PROCEEDINGS

Bremer County

The combined monthly meeting of the Bremer County Medical Society and the staff of St. Joseph Mercy Hospital was held Monday, May 25, at the Fortner Hotel in Waverly. John C. Parsons, M.D., of Des Moines, spoke on The Diagnosis of Tuberculosis.

O. S. Blum, M.D., Secretary

Buchanan County

The regular meeting of the Buchanan County Medical Society was held at the Hotel Gedney in Independence, Thursday, June 18. The program consisted of scientific motion pictures on Infections and Treatment of Hand Injuries, and The Preparation and Use of Blood Plasma.

R. L. Knipfer, M.D., Secretary

Greene County

Edward F. Besser, M.D., of the State University of Iowa, College of Medicine, Iowa City, spoke on The Treatment of Shock and Burns with Plasma, for members of the Greene County Medical Society, meeting in regular session Thursday, June 11, at the hospital in Jefferson.

John R. Black, M.D., Secretary

Hardin County

The Hardin County Medical Society met Tuesday, May 26, in Iowa Falls, with dinner at the Princess Cafe at six-thirty. Christian B. Luginbuhl, M.D., of Des Moines, was guest speaker for the occasion. His subject was Cholecystitis.

W. E. Marsh, M.D., Secretary

Lyon County

Two Sioux City physicians furnished the scientific program for the Lyon County Medical Society at the meeting held Thursday, May 28, at the Hotel Marietta in Rock Rapids. John D. Lutton, M.D., spoke on Obstetrics, and James W. Graham, M.D., discussed Injuries to the Back. There were a number of guests present at the session.

Pottawattamie County

The regular monthly meeting of the Pottawattamie County Medical Society was held Tuesday, May 19,

at the Hotel Chieftain in Council Bluffs. John H. Peck, M.D., and David O. Lindberg, M.D., of the State Sanatorium at Oakdale were present as guest speakers, and discussed The Medical and Surgical Treatment of Pulmonary Tuberculosis.

A forum on the subject of brucellosis was held at the Chieftain Hotel in Council Bluffs, Tuesday, June 23, under the auspices of the Pottawattamie County Medical Society, for physicians and veterinarians of southwestern Iowa and other interested guests. Speakers and subjects were as follows: Brucellosis in Iowa, C. C. Franks, D.V.M., Des Moines; Swine Brucellosis, F. H. McNutt, D.V.M., Ames; Prevalence of Human Brucellosis in Iowa, Carl F. Jordan, M.D., Des Moines; The Laboratory Aspects of Brucellosis, Irving H. Borts, M.D., Iowa City; Clinical Diagnosis of Brucellosis, H. S. Frenkel, M.D., Clarinda; Treatment of Brucellosis, Drs. Harris and Joyst of Des Moines and Marcus, respectively; Control of Brucellosis, J. A. Merchant, D.V.M., Ames; and Discussion of the Brucellosis Problem, J. A. Barger, D.V.M., Des Moines.

Scott County

Meeting in final session before the summer recess, members of the Scott County Medical Society were addressed by Colonel John I. Marker, M.C., on The Rôle of the Medical Profession in the War Effort. Dr. Marker, formerly of Davenport, is now on duty with the armed forces at Fort Leonard Wood, Missouri. The meeting was held at the Hotel Blackhawk in Davenport, Tuesday, June 2.

MARRIAGES

Miss Maxine Pestotnik and Dr. Walter Hartung, both of Iowa City, were married Saturday, May 16, at the home of the bride's parents in Boone. Mrs. Hartung has been serving as supervisor at the Children's Hospital in Iowa City, and Dr. Hartung is radiologist at the State University of Iowa, College of Medicine.

DEATH NOTICES

Lowder, William, of Maquoketa, aged seventy-six, died June 3 of a brain concussion suffered in a fall two weeks ago. He was graduated in 1894 from the Medical College of Indiana, Indianapolis, and at the time of his death was a member of the Jackson County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk DR. PAUL E. GARDNER, New Hampton
DR. JOHN T. MCCLINTOCK, Iowa City DR. HENRY G. LANGWORTHY, Dubuque
DR. WALTER L. BIERRING, Des Moines

Medical History of Webster County

By WILLIAM W. BOWEN, M.D.,
Fort Dodge, Iowa

(Continued from last month)

Dr. Edgar R. Earwood

Dr. Earwood was born in Mason County, West Virginia, September 23, 1886, the son of Ephraim and Susan (Giffen) Earwood. When he was a few weeks old his parents moved to Champaign County, Illinois, and later they moved to Calhoun County, Iowa. He taught one term of school, then took academy work at Drake University in Des Moines from 1906 to 1908. He entered Drake University Medical College and was graduated in 1912. He interned at the Iowa Methodist Hospital in Des Moines and practiced medicine at Madrid, Iowa, until 1916. He then was called to service and was on the Mexican border until 1917. He took postgraduate work in New York in 1917 and entered the service again in June, 1917. He became student instructor at Fort Riley, Kansas, battalion surgeon for the Third Iowa, 168th Infantry (the so-called Rainbow Division) and went to France in November, 1917. He returned to the United States in 1919 and located in Fort Dodge in February, 1920. In 1932 he went to California and located in Hollywood where he has since practiced.

Dr. Earwood had a very large practice in Fort Dodge and acquired considerable property. He has the same kind of practice in Hollywood.

Dr. A. A. Prall

Dr. Prall of Dayton was one of the early physicians of the county. He was born near Keosauqua in 1860, and was the son of Thomas and Rachel (Richardson) Prall. The doctor was educated for his profession in a medical college in Chicago where he also did some postgraduate work later. For a time he was a member of the staff in Niles, Michigan. He came to Dayton and prac-

ticed the rest of his life. He was an eclectic physician, which school is now not known, but in his day there were a number of eclectic doctors. He married Miss Della Bufkin.

Dr. Charles L. Warner

Dr. Charles L. Warner was born in New York, October 15, 1844, where he spent his early childhood. In 1850 his parents moved to the military post at Fort Dodge. His father had a contract with the government to saw lumber for the buildings. When the soldiers left his parents moved to Polk county where his father operated a steam boat plying from Des Moines to Keokuk. In the fall of 1860 the future doctor began studying medicine under the preceptorship of Dr. Robert Armstrong of Keokuk. Later he entered the College of Physicians of Keokuk and was graduated about the time of the outbreak of the Civil War. He enlisted and was sent to Fort Stanton, New Mexico, where he was army surgeon until the close of the war. He located at Homer, now a ghost town in Hamilton county, but then a rival to Fort Dodge. In 1869 he married Miss Kate Coleman and they had four girls and three boys. In 1876 Dr. Warner moved to Dayton, Iowa, where both he and his wife died, she in 1890 and he in 1895. He was a physician of excellent judgment and skill and was very successful. He was a staunch Democrat and was appointed postmaster at Dayton in 1883 and again in 1893, both appointments under Grover Cleveland.

Dr. A. W. Garlock

Dr. Garlock was born in the Mohawk Valley, New York, March 2, 1823. In his younger years he taught school in Jersey City, New Jersey. He

was graduated from Ann Arbor Medical School in 1865 and moved to Dayton, Iowa, after practicing in a small inland town in Boone county called Ridgeport. He practiced in Dayton from 1865 until his death March 2, 1898. He married Miss Julia M. Pratt of Otho. They had one daughter, Irma Edna, who is Mrs. J. V. O'Brien of Topanga, California. Dr. Gardner practiced in the pioneering days when saddle horses and saddle bags were indispensable, and he built up a large and lucrative practice.

Dr. Harry E. Nelson

Dr. Nelson was born of Swedish parents on December 9, 1869. His parents were married in Sweden and immigrated to this country in 1867. They traveled on a sailing vessel and were seven weeks on the ocean. They came direct to Dayton, Iowa, where the doctor's father was a contractor and builder for a few years after which he removed to a farm west of Dayton. He remained only one year and returned to Fort Dodge where he again followed his trade of carpenter and builder. Dr. Nelson was born in Fort Dodge and received his education in the public schools and the Fort Dodge high school. He also took a course in and was graduated from a business college and followed bookkeeping for some years in two or three different concerns. He then entered the Medical Department of the State University and Rush Medical College in Chicago where he was graduated in 1893. He located in Lehigh but after about two years he went to Dayton, Iowa, where he has lived ever since.

When a boy he was run over by a train in the yards and lost a leg which Dr. Seymour amputated at the knee. In spite of this handicap he went through school, high school and medical college, without help from any one, and since then he has followed a very hard and busy practice. He has been successful financially and has the esteem of the profession everywhere he is known, and the love and confidence of thousands of patients and friends. He was married to Miss Leona Beem of Lehigh in 1898. They have three children, a boy and two girls who are married and prosperous. When one considers the success Dr. Nelson has achieved, he can but feel a sort of contempt for the pampered and petted young folks of this age who are always looking for something to be handed to them. Dr. Nelson is one of the best men in the county, always doing kind acts, never asking any odds for himself, but giving of his time and money to any cause that will benefit the poor or be a benefit to his community.

Dr. Gates M. Brown

Dr. Gates M. Brown of Dayton, Iowa, was born August 18, 1872, at Ames, Iowa. He received his premedical education in the State College there and he was graduated from Northwestern University Medical School in 1899, and interned at the Chicago Lying-In Hospital. He began the practice of medicine in Central City, Nebraska, where he remained for some time. He then located at Arlington, Iowa, where he remained ten years and then removed to Dayton, Iowa, where he has remained some twenty-three years. He was married in 1901 to Miss Inez Patterson and they had two children, a boy and a girl. He is a Mason and belongs to the Congregational Church. He has been for years local surgeon to the Northwestern Railroad. He has no hobbies and believes that there is still a place for the old time family doctor. He is a member of the American Association of Railway Surgeons. He is a good and useful man and has the respect of all of his colleagues and of all the good citizens.

Dr. Earl S. Burch

Dr. Burch was born in Lake City, Iowa, April 4, 1901. He attended the high school in Fort Dodge and entered Grinnell College from which he was graduated in 1925. The next year he married Miss Verne Snyder of Fort Dodge. He was connected with the Fort Dodge Tent and Awning Company from 1925 to 1932. He was graduated in medicine from Washington University in St. Louis in 1937 and interned at the City Hospital in St. Louis. He then returned to Fort Dodge and began the practice of medicine as assistant to Dr. E. F. Beeh. After a few months he located in Dayton, Iowa, and now has a growing and profitable practice there.

Dr. John Thompson

Dr. Thompson was a Canadian and was graduated from McGill University in 1892. He went to Nebraska and practiced there for four years and then moved to Duncombe, Iowa, where he spent the remainder of his life. He was a conscientious doctor and had the respect of all his acquaintances. He left a wife and nine children, two of whom are doctors, one a druggist, one a dentist and one an auto dealer in Duncombe. The four daughters are all married.

Dr. C. C. Bell

Dr. Bell also lived in Duncombe for many years but left there some fifteen years ago and was later killed in a train accident in Illinois.

Dr. Hiram H. Baldwin

For years Dr. Baldwin practiced medicine in Clare, Iowa, where he died some ten years ago. He was born in DeKalb, Illinois, in 1849. His father operated a blacksmith and wagon shop in DeKalb for many years. He came to Iowa in 1869 and located on a farm near Lake City. Dr. Baldwin attended the schools in his native town and afterward learned the printer's trade. He came with his father to Lake City and assisted in establishing and operating the first newspaper in Lake City. In 1871 he entered Northwestern University Medical School and remained one year. Since funds were scarce he did other work for some four years then he re-entered and was graduated in 1880. Upon graduation he returned to Lake City, opened an office and practiced there until 1892 when he went to Clare, Iowa, where he remained until his death. He did not affiliate with any church but his wife was a Roman Catholic. They were married in 1882 and she came from Janesville, Wisconsin. The doctor was the first mayor of Lake City, and after he went to Clare he became a part of the landscape so to speak and was respected by a large clientele.

Dr. H. F. Kiesling

Dr. Kiesling of Lehigh, Iowa, was born in Mason county, West Virginia, October 14, 1890. His parents moved to Creston, Iowa, when he was fifteen months old. He was educated in the public schools and was graduated from Creston high school in 1908. He worked and attended business college in Creston and in 1909 he entered the State University of Iowa. He continued his medical studies there and was graduated in 1916. In July of the same year he went to the Algona Hospital with Dr. M. J. Kenefick. He was called to the colors in March, 1918, and was sent to Atlanta, Georgia and to France in September 1918, where he served in several hospitals until June 20, 1919. He returned to America and located in Lehigh, Iowa, where he has been a successful practitioner.

Dr. Adolph A. Arent

Dr. Adolph A. Arent was born at Creston, Illinois, September 9, 1873. He was the eldest of eight children born to Andrew and Ellen Arent who lived long at Badger, Iowa. When a child the doctor's parents moved from Creston, Illinois, to Badger, Iowa, where Andrew, his father, was a large land owner. He was graduated from the high school in Fort Dodge, and entered Rush Medical College in Chicago where he was graduated in 1895. He located in Callender, Iowa, where he spent his life, and died there in 1936

after a long illness from cancer of the larynx. He married Miss Anna C. Mortimer who survives him and now lives in Los Angeles, California. They had one daughter who is married and lives with her mother. Dr. Arent was a good practitioner and had the respect of everybody who knew him. He could always see the bright side of everything even during his last illness. He said shortly before his death "My mind is free from anxiety. I have long ceased to worry, for the past is irreparable and I am hopeful for the future. We are all placed here for different reasons. Some achieve the goals they anticipate, others do not: but if one does his best and if he tries to make the plight of someone else a little better, he has accomplished his work in life; that is all he is expected to do." This was his philosophy of life and it is good.

Dr. Donald Borgen

Dr. Borgen was born in Hartland, Minnesota, October 19, 1904, and came to Iowa with his folks in 1915. He was graduated from the State University of Iowa, College of Medicine, in 1922, and interned in Ancker Hospital in St. Paul. He came to Gowrie, Iowa, in 1932 and has practiced there since. He is married and is a regular attendant at the hospital staff meetings in Fort Dodge.

Dr. Arthur W. Lundvick

Dr. A. W. Lundvick was born near Harcourt, Iowa, September 24, 1877. He was educated in the public schools and in Tobin College, Fort Dodge. He taught school a few years and took up the study of medicine in the Medical Department of the State University, where he was graduated in 1902. He located in Gowrie, Iowa, where he has practiced since. In 1907 he took an examination before the State Board of Pharmacy and passed. He then bought the Lundvick Pharmacy in Gowrie and operated it in connection with his medical practice until 1920 when he sold it and devoted all his time to the practice of medicine. He has done postgraduate work in Chicago and at the Mayo Clinic. He is local surgeon for the Chicago and Pacific Railroad.

Dr. Charles Melvin Ericsson

Dr. Ericsson of Gowrie was born on a farm near Dayton, Iowa, June 24, 1872. He attended the Dayton schools and was graduated from Highland Park College in Des Moines in 1894, after which he taught in the country schools for a few years. He then attended the State University of Iowa, College of Medicine, from which he was graduated in 1905. He located in Gowrie, Iowa, where he practiced until his death on July

30, 1932. He was married to Miss Sadie Martin-dale in 1911.

Dr. George D. Hart

Dr. George D. Hart of Otho, Iowa, was one of the early physicians of Webster county. He was born in Adams county, Illinois, in 1835. He came to Webster county in 1854 with his parents. He died suddenly in 1880. When he came to Iowa there was not a single railroad in the state and the first Congregational Church in Webster county was organized in their home. He was in the United States army during the war, but served as a hospital warden. After receiving an honorable discharge because of disability he returned to his home and began the study of medicine under the preceptorship of Dr. S. B. Olney who had been chief surgeon in his regiment. He began practicing medicine while he was still living on his farm. The doctor was married twice, first to Miss Orlinda S. Moore who died in 1883. His second wife was Mrs. Annie Perry. The doctor was a very good and useful citizen. He filled all positions held by him with fidelity and conducted a considerable medical practice in his community.

Dr. Andrew Lincoln Belt

Dr. A. L. Belt was born in Tama county, Iowa, March 1, 1861. He was educated in the public schools there and in Old Western College in that county, and afterward attended the Medical Department of the State University where he was graduated in 1890. He began to practice in Haven, Tama county, but remained there only a short time and went to Gilmore City, Iowa, where he practiced until 1910. He then sold his practice and a fine home he owned to Dr. Smith J. Townsend, and he and Dr. Wilson of Rolfe, Iowa, went west and started a saw mill. Dr. Belt was a good doctor and very successful in Gilmore City, but neither he nor Dr. Wilson knew anything about running a saw mill, and in about a year they were about cleaned up. Dr. Belt returned to Iowa and located in Fort Dodge where he practiced until his death which occurred March 7, 1920. He volunteered during World War I and received an honorable discharge. He married Miss Jane Dexter on September 3, 1887. They raised three children, Behring, who is now practicing medicine in Hermiston, Oregon, Dorothy and Bessie, now Mrs. W. J. Oppold of Fort Dodge.

The foregoing are the most important physicians, but there are numerous others who made little impression on the community or who stayed

only a short while. Some of them should have some notice. Among them are the following:

Dr. Nevill M. Joyner who has been here only a few months and has his spurs still to win.

Dr. Forrest J. Austin who is head of the health unit and was sent here a short time ago by the State Department of Health.

Dr. G. Prentiss McArdle who has been here only about three months as an associate of Dr. E. M. Kersten.

Dr. William D. Farrell who was here for two years about 1900 and is now practicing in Aberdeen, South Dakota.

Dr. Graham Asher who is now in Kansas City, Missouri.

Dr. Roland Stahr who is now in Reno, Nevada.

Dr. A. D. Newbert who is now in Redlands, California.

Dr. Judson Laughlin who practiced in Duncombe for two years.

Dr. O. H. Pagelsen, now in Iowa Falls.

Dr. C. W. Ellyson, now in Waterloo.

Dr. Evon Walker, now in Ottumwa.

Dr. M. L. Zox who lived in Callender for two years.

Dr. C. I. Fox who had a good practice in Callender, but who now lives in Pella, Iowa.

Dr. E. J. Lundvick who lived in Harcourt many years. He was a brother of Dr. A. W. Lundvick of Gowrie. He died some years ago.

Dr. Jones who lived at Lehigh, later at Vincent and still later at Badger.

Dr. Miner who was here a long time, but from whom no data could be obtained. He left here to become superintendent of the Inebriate's Home at Knoxville and has since died.

Dr. Luther Kepler who was here a few years and at Otho in this county for a few years, but left some time ago and died near Cedar Rapids in 1939.

There are now three doctors from this county in the army; they are Dr. Matthew J. Sanders, Dr. Charles J. Baker and Dr. Charles H. Coughlan.

THE END.

SAVE MEDICAL JOURNALS

Dr. Jeannette Dean-Throckmorton, Librarian of the Iowa State Medical Society Library, located at the Historical Building in Des Moines, is most anxious to receive old copies of medical journals. They should be sent directly to her.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

THE 1942 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

BODY MECHANICS IN HEALTH AND DISEASE—By J. E. Goldthwait, M.D., L. T. Brown, M.D., L. T. Swaim, M.D., and J. G. Kuhns, M.D. J. B. Lippincott Company, Philadelphia, 1941. Price, \$5.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

IMMUNOLOGY—By Noble Pierce Sherwood, M.D., professor of bacteriology, University of Kansas. Second edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$6.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.

COMMUNICABLE DISEASE NURSING—By Theresa I. Lynch, R.N., Ed.D., Instructor in Education, New York University. The C. V. Mosby Company, St. Louis, 1942. Price, \$3.75.

GYNECOLOGY AND FEMALE ENDOCRINOLOGY—By Emil Novak, M.D., associate in gynecology, The Johns Hopkins Medical School. Little, Brown and Company, Boston, 1941.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schaufler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

BOOK REVIEWS

INFANTILE PARALYSIS

A Symposium delivered at Vanderbilt University in April, 1941. Published by the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York, N. Y., 1941. Price, \$1.25.

This volume is a symposium on our present knowledge of infantile paralysis. It consists of six lectures by authorities in various specialties concerned with the cause, the method of spread, the prevention and the treatment of this serious disease.

Paul Clark presents a fascinating story of the history of poliomyelitis. Charles Armstrong of the United States Public Health Service discusses the etiology of the disease and indicates the trend to the theory of a gastro-intestinal portal of entry. Thomas M. Rivers of the Rockefeller Institute considers the immunologic and serologic phenomena in the disease in a comprehensive manner. Ernest W. Goodpasture of Vanderbilt University, an authority on the pathology of poliomyelitis, discusses the pathology and pathogenesis of the disease. John R. Paul of Yale University, another ardent investigator, presents the present concept of the epidemiology of the malady. The last chapter is a brief discussion of treatment and rehabilitation by Frank R. Ober of Harvard University.

The knowledge provided in this small volume should prove invaluable to the practicing physician, the orthopedist, the public health officer and the student of medicine. Contributions to the knowledge of

the disease occur so rapidly that it is almost impossible to keep abreast of modern concepts. However, much of the baffling mystery of poliomyelitis is elucidated by this resumé by authorities in the study of the disease.

D. K.

CARDIAC CLASSICS

By Fredrick A. Willius, M.D., and Thomas E. Keys, M.D., The Mayo Clinic. The C. V. Mosby Company, St. Louis, 1941. Price, \$10.00.

This is an interesting and very instructive volume. It contains brief, well written biographies of the builders of modern cardiology. In addition, the outstanding contribution which these men made to our knowledge of heart diseases has been reprinted either in the original or in very good translations. The book contains many good illustrations. The publishers' contribution to the volume is fully up to the previous high standards. The volume closes with a medical sermon "The Stethoscope Song" by Oliver Wendell Holmes and the sermon is written in the inimitable style of that charming New England physician and poet.

"Cardiac Classics" would be a splendid contribution to any physician's library. It should be an essential part of the library of anyone who is specially interested in cardiology. The book has given the reviewer no end of pleasure.

D. J. G.

BODY MECHANICS IN HEALTH AND DISEASE

By Joel E. Goldthwait, M.D., Lloyd T. Brown, M.D., Loring T. Swaim, M.D., and John G. Kuhns, M.D. J. B. Lippincott Company, Philadelphia, 1941. Price, \$5.00.

This book is basically orthopedic in nature, but the scope of application of body mechanics has been enlarged to include the prevention and treatment of many of the chronic diseases. Body types are described and the maladies most common to each type are enumerated. Good body mechanics and variations are dealt with fully. The impairment in physiology which results from poor body mechanics and its relation to chronic diseases of the musculo-skeletal, circulatory and nervous systems and gastrointestinal tract is described and illustrative cases are very revealing. Specific exercises to correct various defects are given in simple and practical form.

This comparatively new approach to the problem of chronic disease should interest all physicians.

D. N. G.

THE NEW INTERNATIONAL CLINICS

Volume IV, New Series Four. Edited by George M. Piersol, M.D., professor of medicine, Graduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1941.

This volume contains eleven excellent original contributions on various subjects by authorities in medicine, and ten clinics by members of the Faculty of the University of Minnesota Medical School. The review of recent progress is by Calvin M. Smyth, Jr., of Philadelphia, on the subject of The Surgery of Modern War.

The Treatment of Congestive Heart Failure by Chester S. Keefer, emphasizes the necessity of recognizing the cause of heart failure in treating the patient. It is also important to determine the failure of the left and right ventricles, the cardiac rhythm and the degree of congestion. An excellent article by Bothe and Pote of Philadelphia reviews 154 cases of mesenteric adenitis. Acute appendicitis was found in twenty-eight patients. The diagnosis is primarily surgical, and all cases should have an exploratory laparotomy lest an acute appendiceal condition be overlooked. Seventy-seven per cent of the patients showed evidence of lowered nutrition. Therapy designed to improve nutrition should be included in the postoperative regime.

The clinics include an analysis of twenty-three patients with patent ductus arteriosus; the effect of digitalis in cases of cardiac failure with regular rhythm, in which 70 per cent responded favorably; a presentation of two cases of myxedematous ascites; a clinic on extrarenal uremia due to dehydration from vomiting or diarrhea; and a splendid consider-

ation of cystic disease of the lung. The pathogenesis and treatment of staphylococcal infections by Spink is an excellent contribution. Rea in a clinic on undescended testis concludes that endocrine therapy is of value only in differentiating the surgical patient.

This excellent volume is of the same high quality as the remainder of the series. The authors are qualified specialists; the material is varied; the contents are interesting and easy to read. The New International Clinics can be recommended without reservation.

D. K.

COMMUNICABLE DISEASE NURSING

By Theresa I. Lynch, R.N., Ed. D., Instructor in Education, New York University. The C. V. Mosby Company, St. Louis, 1942. Price, \$3.75.

This volume might well be used as an orientation course in public health as well as for communicable disease nursing.

The book is divided into five parts: the first deals with an orientation to communicable disease nursing which is excellent; the second discusses medical aspects and nursing care of communicable diseases. The diseases are classified according to portal of entry. Each of the forty-one diseases are fully covered in separate chapters with special emphasis upon scientific phases of the disease as to cause and diagnosis, methods of control and nursing care. The third and fourth parts deal with tuberculosis and with the venereal diseases and again stress scientific phases, control measures and nursing care. The fifth part treats the home care of communicable diseases from a nursing and public health standpoint. Opportunities for nurses in communicable disease nursing are also discussed.

The book is well organized and well written. Chapter headings and paragraphs are in large print; references and suggested readings are listed at the end of each chapter. There are 156 text illustrations and five color plates which aid greatly in understanding techniques and room set-ups. The appendices consist of other communicable diseases not discussed in the text; New York State Department of Health requirements for communicable disease control; procedures for general hospitals and additional specific nursing procedures.

This book should be a good text for students, an excellent reference for the instructor, a valuable aid for the public health nurse in communicable disease nursing, and of real assistance to the graduate nurse in caring for a patient with communicable disease in the home. Instructors of home nursing classes would also find it valuable.

The author has incorporated the public health principles of communicable disease prevention unusually well.

A. O'L.

HEMORRHAGIC DISEASES

By Kaare K. Nygaard, M.D., former fellow in surgery, The Mayo Foundation. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.50.

In this splendid study of blood coagulability the author has applied a new technic. Blood coagulability is affected by hematologic factors and external factors. The fact that increased density occurs during the coagulation of recalcified plasma suggested to him the use of the photo-electric cell to determine blood coagulability, thus keeping the external factor constant. For this purpose he developed the photelgraph. This instrument produces the coagelgrams. Numerous studies were made to determine the normal coagelgram.

In Part II of the book are listed the experimental investigations on coagulability of blood plasma, the interaction of thrombofibrinogen, the coagulatory effect of thromboplastin, and the estimation of prothrombin. Part III of the book is devoted to the application of the principles discussed in Parts I and II to the study of the various hemorrhagic diseases.

This volume essentially represents the report of the author's research on this subject and will appeal to the limited few who are especially interested in blood coagulability. For those it opens up a new field for investigation.

A. L. J.

A TEXTBOOK OF SURGERY

Edited by Frederick Christopher, M.D., associate professor of surgery, Northwestern University Medical School. Third edition, completely revised and reset. W. B. Saunders Company, Philadelphia, 1942. Price, \$10.00.

The first edition of Christopher in 1936 was a distinct departure from precedent in that each subject was covered by an expert in this field. This was the natural result of specialization within the field of surgery, which made it impossible for any one surgeon to write a general textbook on the basis of his own experience. The older "one-man" books at once became obsolete because they were no longer authoritative. The contributors to this book are not merely specialists, but in most instances, are pre-eminently qualified to write on their respective subjects.

The third edition of this book is completely revised and reset. There are many new contributors owing to the death of several of the original contributors including Gatewood, Campbell, Andrews and Lewis. The new contributors are Elliott Cutler, Newton D. Smith, Alfred Blalock, Robert H. Kennedy, and Hiram D. Miller. The most recent advances in surgery are included, and the new work on the sulfonamides has been covered by the various authors.

The illustrations are numerous and well placed in relation to the printed matter. The style of the latter is practical and complete. One might wish that

this completeness had not been carried to such extremes in the chapter on carcinoma of the breast. Here the reader becomes lost in lengthy footnotes in fine type; they seem out of place in a book which is otherwise forthright and to the point. In spite of minor criticisms, this reviewer considers Christopher's work the most valuable and complete one volume textbook of surgery.

J. M. B.

SYNOPSIS OF ALLERGY

By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

This brief treatise is exactly what its name implies: a synopsis of allergy. However, this difficult subject has been summarized in such a manner that little of the present day knowledge of allergy which is proved and usable has been omitted. The author does not delve too deeply into theory but emphasizes that which is proved and practical. Chapters have been devoted to each of the important types of allergy such as bronchial asthma, hay fever, etc., and there are brief discussions of other syndromes which have been presumed to belong in this field. Accepted methods of diagnosis and treatment are discussed briefly, yet in a very lucid manner.

This book should be a useful one to the busy general practitioner for whom it is primarily intended.

J. W. Y.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES

By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

Craig states that this book is intended as a manual of laboratory methods for the diagnosis of diseases caused by protozoan organisms. However, it is more than a manual; it is a critical comprehensive survey of the procedures used in the diagnosis of amebiasis, flagellate infections, the leishmaniases, the trypanosomiases, coccidioidosis, malaria and balantidiosis. At the end of the discussion of each group of diseases there is a practicable "critique of laboratory methods" in which the essential procedures necessary for diagnosis are outlined. An excellent bibliography is found at the end of the book.

This very well written and fairly well illustrated book is highly recommended by the reviewer both to physicians interested in protozoology and to laboratory technicians. Clinicians considering the purchase of a book on protozoology should remember that this subject is covered in "Clinical Parasitology" written by Craig and Faust (Lea and Febiger, 1940, \$8.50).

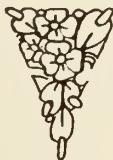
R. F. B.

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1942



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 Boden, Worthey C., Davenport (Sikeston, Missouri)
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 Chittum, Josiah M., North Liberty
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 Christensen, Eunice M., Grand Mound
 Christensen, Everett D., Grand Mound
 Christensen, John R., Eagle Grove
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 Coburn, Frank E., Iowa City
 Coddington, James H., Humboldt
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 Coffin, Lonnie A., Farmington
 Cogley, John P., Council Bluffs
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 Cole, Fern N., Iowa Falls
 Cole, Harold P., Thurman
 Cole, Julia, Ames
 Collester, Charles C., Spencer
 Collins, Harry A., Des Moines
 Collins, Loren E., Estherville
 Collins, Robert M., Council Bluffs
 Conaway, Aaron C., Marshalltown
 Condon, Frank J., Centerville
 Connem, Roy M., Sergeant Bluff
 Connell, John, Des Moines
 Connelly, Edgar J., Dubuque
 Conner, Frank H., Nevada
 Conner, John D., Nevada
 Conzett, Donald C., Dubuque
 Cook, Clarence P., Des Moines
 Cook, John O., Madrid
 Cook, Kenneth G., Fairfield
 Cook, Stuart H., Rock Rapids
 Cook, Walter R., Pisgah
 Cooper, Clark N., Waterloo
 Cooper, Gladys A., Red Oak
 Cooper, Jay C., Liscomb
 Cooper, Raymond E., Keokuk
 Cooper, Thaddeus C., Ogden
 Cooper, Wayne K., Iowa City (Jefferson Barracks, Missouri)
 Corbin, Sylvanus W., Corydon
 Corcoran, Louis L., Rock Rapids
 Corcoran, Thomas E., Rock Rapids (A. P. O., New York, New York)
 Cords, Charles H., Rudd
 Corn, Henry H., Des Moines
 Cornell, Corwin S., Knoxville
 Cornell, Dale D., Greenfield
 Corns, William, Marshalltown
 Costello, William E., Dubuque
 Coughlan, Charles H., Fort Dodge (Jefferson Barracks, Missouri)
 Coughlan, Daniel W., Des Moines
 Courshon, Benjamin, Sioux City
 Cowan, John A., Sioux City
 Cowgill, Frank W., Nevada
 Crabb, George M., Mason City
 Craig, James A., Keosauqua
 Crain, Lewis F., Deep River (L.M.)
 Crain, Mattie M., Deep River (L.M.)
 Crane, Wendell P., Holstein
 Crawford, Jennings, Cedar Rapids
 Crawford, Robert H., Burlington
 Cressler, Frank E., Churdan
 Cretzmeyer, Charles H., Algona
 Cretzmeyer, Francis X., Emmetsburg
 Crew, Arthur E., Marion
 Crew, Philip L., Marion
 Crew, William F., Massena
 Cronk, Charles H., Bloomfield (L.M.)
 Cross, Donald L., Coon Rapids
 Crow, George B., Burlington
 Crow, Ira N., Fairfield
 Crowder, Roy E., Sioux City
 Crowell, Edwin A., Jr., Iowa City
 Crowley, Daniel F., Des Moines
 Crumpton, Robert C., Webster City
 Cruzen, John L., Barnes City
 Culbertson, Robert A., St. Ansgar (Fort Des Moines, Iowa)
 Cullen, Stuart C., Iowa City
 Cullison, Robert M., Dayton, Ohio
 Cunningham, John C., Dubuque
 Cunningham, Melvin B., Norwalk
 Cusick, George W., Princeton
 Cutler, Roy H., Little Sioux
 Dahl, Harry W., Des Moines
 Dahlbo, John E., Sutherland
 Dahlquist, Ralph M., Decorah
 Daily, Milton, Sioux City (L.M.)
 Dakin, Channing E., Mason City (L.M.)
 Daly, James J., Decorah (L.M.)
 Danielson, May, Iowa City
 Danley, Royal C., Hamburg
 Darling, John P., Rochester, Minnesota
 Darrow, Clarence A., Dubuque
 Daut, Walter W., Muscatine
 Davey, William P., Emmetsburg
 Davidson, Lawrence L., Lake City
 Davidson, Thorald E., Mason City
 Davis, Arthur E., Seymour
 Davissom, Robert R., Winterset (L.M.)
 Dawson, Emerson B., Fort Dodge
 Day, Charles S., Cedar Rapids
 Day, Philip M., Oskaloosa
 Day, William E., Clarksville
 Dean, Abbott M., Council Bluffs
 Dean, Frank W., Council Bluffs (L.M.)
 Dean, Ray H., Washington (L.M.)
 Dean, William F., Osceola
 de Bey, John G., Orange City
 DeCicco, Ralph, Des Moines (Oahu, Hawaii)
 Decker, Henry G., Des Moines (San Diego, California)
 Decker, Jay C., Sioux City
 Deering, Albert B., Boone
 Deering, John S., Onawa
 Demaree, Chester, Laconia

- Dennison, John C., Bellevue (L.M.)
 Denny, Thomas C., Des Moines (L.M.)
 DeShaw, Earl H., Monticello
 Des Marias, Varina, Grundy Center
 Deters, Donald C., Schaller (A. P. O., New York, New York)
 Devereux, Richard L., Sioux City
 Dewees, Frank L., Keokuk
 Dewey, Jay R., Schaller
 DeWitt, Charles H., Jr., Macedonia
 DeWitt, Franklin T., Nemaha (L.M.)
 DeYarman, Kyle T., Morning Sun
 DeYoung, George M., George
 DeYoung, Ward A., Glenwood
 Dickey, Claude G., Des Moines
 Diddle, Albert W., Iowa City (Key West, Florida)
 Diddy, Keith W., Perry
 Dierker, Bernard J., Fort Madison
 Dierker, Frank H., Fort Madison
 Dimond, Charles A., Keokuk
 Dimond, Dorothy S., Albany, Illinois
 Dimsdale, Lewis J., Sioux City
 Dingman, Marshal E., Urbana
 Ditto, Boyd L., Burlington
 Dixon, George L., Tucson, Arizona (L.M.)
 Doane, Grace O., Des Moines
 Dobias, Stephen G., Chelsea (Fort Greeley, Alaska)
 Dobson, Richard A., Sioux City
 Doering, Valentine T., Fort Madison
 Dolan, Henry F., Anamosa
 Dolmage, George F., Buffalo Center
 Dolmage, G. Howard, Buffalo Center
 Donahue, James C., Centerville
 Donelan, James M., Glenwood (L.M.)
 Donlan, Eugene V., Clinton
 Donnell, John W., Hudson
 Donnelly, William L., Davenport
 Donohoe, Anthony P., Davenport
 Donohue, Edmund S., Sioux City
 Donovan, William H., Iowa City
 Doolen, Glen W., Davenport
 Doolittle, Russell C., Des Moines
 Doornink, William, Orange City
 Dorner, Ralph A., Iowa City
 Dorsey, Thomas J., Fort Dodge
 Doss, William N., Leon (Camp Murray, Washington)
 Dowling, C. Dean, Waterloo
 Down, Howard I., Sioux City
 Downing, James A., Des Moines
 Downing, Leroy M., Cedar Rapids
 Downing, Wendell L., LeMars
 Downing, William L., Moulton (L.M.)
 Downs, Vernon S., Ottumwa
 Dressler, John B., Ida Grove
 Driver, Richard W., Waterloo
 Droz, A. Keith, Washington
 Dubrow, James L., Des Moines
 Dulin, Evelyn H., Iowa City
 Dulin, John A., Sigourney
 Dulin, John W., Iowa City
 Dulin, Tarana J. G., Sigourney
 Duling, Raymond J., Sioux City
 Dulmes, Abraham H., Klemme
 Dunkel, George K., Fairfield
 Dunkelberg, Elmer I., Waterloo
 Dunlap, Wallace A., Des Moines
 Dunn, Francis C., Cedar Rapids
 Dunn, James, Davenport
 Durfee, Max L., Cedar Falls
 Durkee, Harry C., Little Rock
 Durrill, Everett L., Fort Madison
 Dusdieker, Stanley W., Des Moines
 Dushkin, Milton A., Des Moines (Fort Huachuca, Arizona)
 Dutton, Dean A., Van Horne
 Dvorak, Joseph E., Sioux City
 Dwyer, Bernard B., Preston
 Dwyer, Robert E., Clinton
 Dyson, James E., Des Moines
 Earl, Warren Z., Sioux City
 Ebersole, Francis F., Mt. Vernon
 Edington, Frank D., Spencer (St. Louis, Missouri)
 Edmonds, Charles W., Bedford
 Edstrom, Henry, Dubuque
 Edwards, Charles V., Council Bluffs
- Edwards, James F., Ames
 Edwards, Ralph R., Centerville
 Egan, Thomas J., Bancroft
 Egbert, Daniel S., Atlantic (Fort Snelling, Minnesota)
 Egermayer, George W., Elliott
 Eggleson, Alfred A., Burlington
 Egloff, William C., Mason City
 Eiel, Hans E., Buffalo Center (L.M.)
 Eiel, John O., Osage
 Eiel, Merrill O., Osage
 Eigenfeld, Morris L., Burlington
 Eischeid, Rudolph J., Dubuque
 Eland, Thomas J., Letts
 Eller, Lancelot W., Kanawha
 Elliott, Olin A., Des Moines
 Elliott, Vance J., Knoxville (South Laguna, California)
 Elliott, William J., Dawson
 Ellis, Howard G., Des Moines
 Ellison, George M., Clinton
 Ellylon, Charles W., Waterloo
 Ellylon, Craig D., Waterloo
 Elmquist, Homer S., Iowa City
 Elson, Veryl J., Danbury (A.P.O., Seattle, Washington)
 Elvidge, George P., Perry
 Ely, Francis A., Des Moines
 Emerson, Edward L., Muscatine
 Emmons, Marcus B., Iowa City
 Ennis, Harry H., Decorah
 Ensley, Bruce, Shell Rock
 Entringer, Albert J., Dubuque (Camp Murray, Washington)
 Entz, F. Harold, Waterloo
 Ericsson, Martin G., Cedar Falls
 Ernst, Floyd W., New Albin
 Erskine, Arthur W., Cedar Rapids
 Ervin, Lindsay J., Des Moines (Brownwood, Texas)
 Evans, Harold J., Davenport
 Evans, John G., New Hartford (L.M.)
 Evans, Titus C., Iowa City
 Evans, William I., Sac City
 Everall, Bruce B., Monona
 Evers, Lorance B., Iowa City
 Eversmeyer, Benjamin E., Muscatine
 Everson, Gustave A., Rolfe
 Faber, Luke A., Dubuque
 Fagen, Rodney P., Des Moines
 Fail, Charles S., Jr., Adel
 Fallows, Howard D., Mason City (L.M.)
 Farlow, Charles T., Farnhamville
 Farnham, Alfred J., Traer
 Farnsworth, Harold E., Storm Lake
 Faust, John H., Manson
 Fay, Oliver J., Des Moines
 Fee, Charles H., Denison
 Fee, Knight E., Toledo
 Feichtner, Robert L., Fort Madison
 Feller, Alto E., Iowa City (Camp Clai-borne, Louisiana)
 Fellows, Joseph G., Ames
 Fellows, Liberty E., Newton
 Felter, Allan G., Van Meter
 Fenlon, Leslie K., Clinton
 Fenton, Charles D., Bloomfield
 Fenton, Robert L., Centerville
 Ferlic, Rudolph J., Lake View
 Field, George A., Des Moines
 Fields, Robert B., LaPorte City
 Fieseler, Walter R., Fort Dodge
 Files, Edward H., Cedar Rapids
 Fillenwarth, Floyd H., Charles City
 Finch, George H., Des Moines
 Findley, William J. K., Sac City (L.M.)
 Fisch, Roman J., LeMars
 Fisher, William C., Williamson*
 Fisk, Charlotte, Des Moines
 Fitzgerald, Joseph D., Sloan
 Fitzpatrick, Dennis F., Iowa City
 Flater, Norman C., Floyd
 Flax, Ellis, Iowa City (Edwight, West Virginia)
 Fleck, Warren L., Albuquerque, New Mexico
 Fleischman, Abraham G., Des Moines
 Fletcher, Frederick W., Hinton
 Flickinger, Roger R., Mason City
- Flocks, Rubin H., Iowa City
 Floersch, Eugene B., Council Bluffs
 Floyd, Mark L., Iowa City
 Flynn, Charles H., Clarinda
 Flynn, Joseph E., Jr., Iowa City (Hot Springs National Park, Arkansas)
 Foley, Fred C., Newell
 Foley, Walter E., Davenport
 Foltz, Eloise G., Perry
 Fordyce, Frank W., Des Moines
 Foss, Robert H., Remsen
 Foster, Jess W., Ankeny
 Foster, Morgan J., Cedar Rapids
 Foster, Samuel T., Adel
 Foster, Warren H., Clinton
 Foster, Wayne J., Cedar Rapids
 Foulk, Frank E., Des Moines
 Fourt, Arthur S., Iowa City (Camp Clai-borne, Louisiana)
 Fowler, Charles C., Lovilia
 Fowler, Willis M., Iowa City
 Fox, Charles I., Pella (L.M.)
 Fox, Ray A., Charles City
 Franchere, Chetwynd M., Mason City
 Francis, Norton L., Iowa City (Annapolis, Maryland)
 Frank, Louis J., Sioux City
 Frank, Owen L., Maquoketa
 Franklin, George W., Jefferson
 Fransco, Peter P., Ruthven
 Fraser, James B., Des Moines
 Fraser, John H., Monticello
 Frech, Raymond F., Newton
 Frederickson, Adolph R., Lansing
 Freiligh, Clarence N., Waucoma
 French, Charles H., Cedar Rapids (L.M.)
 French, Royal F., Marshalltown
 French, Valiant D., Carson
 Frey, Harry, Fairfield
 Fritch, Arthur F., Decorah (Pearl Har-bor, Hawaii)
 Fritschel, Godfrey C., Dubuque
 Fritz, Lafe H., Dubuque
 Fry, John L., Kalona
 Fuerste, Frederick, Dubuque
 Fuller, Frank M., Keokuk
 Fullerton, Oscar L., Redding (L.M.)
 Fullgrabe, Emil A., Indianola
 Fulliam, Edmond B., Jr., Muscatine
 Furgerson, Lee B., Waterloo
 Gaard, Rasmus R., Radcliffe
 Galinsky, Leon J., Oakdale
 Gallagher, John P., Oelwein
 Galloway, Milton B., Webster City
 Galman, James J., Hospers
 Galvin, Robert J., Oelwein
 Gambee, Eric J., Earling
 Gamble, Robert A., Madrid
 Gamet, Elmo E., Lamoni (Tacoma, Wash-ington)
 Ganoe, James O., Ogden
 Gantz, Albert J., Greenfield
 Ganzhorn, Harold L., Mapleton
 Gardner, Harold O., Waterloo
 Gardner, John R., Lisbon
 Gardner, Paul E., New Hampton
 Garlinghouse, Robert O., Iowa City (Fort Snelling, Minnesota)
 Garside, Arthur A., Davenport
 Gauger, John W., Early
 Gaukel, Leo A., Onawa
 Gaumer, James S., Fairfield
 Gearhart, George W., Springville
 Geeseka, Otto A., Mt. Pleasant (L.M.)
 Gelfand, Ben B., Sioux City
 Gelfand, Della G., Sioux City
 George, Everett M., Des Moines
 George, Joseph, Dows
 Gerken, James F., Waterloo
 Gernsey, Merrit N., Waverly
 Gerstman, Herbert, Marion
 Gessner, Frederick W., Dysart
 Getty, Everett B., Primghar
 Gibbon, William H., Sioux City
 Gibson, Chelsea D., Lake View
 Gibson, Douglas N., Des Moines
 Gibson, Paul E., Des Moines
 Gibson, Preston E., Davenport
 Gifford, Albert K., Cedar Rapids

- Giles, Francis E., Cresco
 Giles, George C., Oakland
 Gilfillan, Bruce L., Keokuk
 Gilfillan, Clarence D. N., Eldon
 Gilfillan, George W., Bloomfield
 Gilfillan, Homer J., Cantril
 Gillespie, Chauncey M., Melcher
 Gillespie, Hamilton S., Sioux City
 Gillett, Francis A., Oskaloosa
 Gillies, Carl L., Iowa City
 Gillmor, Benjamin F., Red Oak
 Gingles, Earl E., Onawa
 Gittins, Thomas R., Sioux City
 Gittler, Ludwig, Fairfield (Camp Clai-borne, Louisiana)
 Givens, Hezekiah F., West Bend
 Glasscock, Thomas J., Hawarden
 Glesne, Otto N., Fort Dodge
 Gleysteen, Derk J., Alton
 Gloeckler, Bernhard B., Mt. Pleasant
 Glomset, Daniel J., Des Moines
 Goad, Robley R., Muscatine (Hyattsville, Maryland)
 Goen, Edwin J., Manchester
 Goenne, William C., Davenport
 Goggin, John G., Ossian
 Goltby, Charles F., Russell
 Goodenow, Sidney B., Colo
 Goodrich, Joseph A., Des Moines
 Gordon, Arnold M., Des Moines
 Gorrell, Ralph L., Clarion
 Gottlieb, Jacques S., Iowa City
 Gottsch, Erwin J., Shenandoah
 Gould, George R., Conrad
 Gould, Isaac L., Kellogg
 Gower, Walter E., Pocahontas
 Gruber, Harold E., Fairfield
 Graeber, Frederick O., Des Moines (Aber-deen, South Dakota)
 Graening, Charles H., Waverly (L.M.)
 Graham, George W., Collins
 Graham, James W., Sioux City
 Gran, Albert G., Storm Lake
 Grant, Cecil C., Cedar Falls
 Grant, John G., Ames
 Gray, Henry A., Keokuk
 Gray, Howard D., Des Moines
 Gray, John F., Melcher
 Gray, Ralph E., Eldora
 Gray, Samuel T., Albia (L.M.)
 Grayston, Jesse T., Cedar Rapids
 Greene, James A., Iowa City
 Greenleaf, William S., Atlantic
 Greenlee, Max R., Oskaloosa
 Gretzman, Theodore J., Iowa City
 Griffin, Clark C., Jr., Vinton (L.M.)
 Griffin, Frank L., Baldwin
 Griffin, John M., Des Moines
 Griffin, Sara M. F., Manson
 Griffith, William O., Shelby
 Grimm, Peter G., Spirit Lake
 Grinley, Andrew W., Rockwell City (Seattle, Washington)
 Groman, August, Odebold (L.M.)
 Gross, Erwin G., Iowa City
 Grossman, Milton, Sioux City (Taft, California)
 Grossman, Raymond S., Marshalltown
 Grossmann, Edward B., Orange City
 Grothaus, Dell L., Delta
 Grubb, Merrill W., Galva
 Gunn, Ross E., Boone
 Gurau, Henry H., Des Moines
 Gutch, Roy C., Chariton
 Gutch, Thomas E., Albia
 Hage, Martin M., Lake Mills
 Hagen, Edward F., Decorah
 Haines, Diedrich J., Des Moines
 Haisch, Lily K., Dubuque
 Haisch, Otto E., Dubuque
 Hale, Albert E., Dougherty
 Hale, William H., Iowa City
 Hall, Bonnybel A., Maynard
 Hall, Cluley C., Maynard
 Hall, Forest F., Webster City
 Halloran, William H., Audubon
 Halpin, Lawrence J., Cedar Rapids (Atlanta, Georgia)
 Hamilton, Benjamin C., Jefferson (L.M.)
 Hamilton, Benjamin C., Jr., Jefferson
 Hamilton, Cecil V., Garner
 Hamilton, Harriett S., Council Bluffs
 Hamilton, Henry H., Cedar Rapids
 Hamilton, William F., Marshalltown
 Hamstreet, Wilbur F., Titonka
 Hanchett, W. McMicken, Council Bluffs
 Hancock, John C., Dubuque
 Hand, William C., Hartley
 Hands, Sidney G., Davenport
 Hankey, Daniel C., Council Bluffs
 Hanna, John T., Burlington
 Hansell, William, Ottumwa (L.M.)
 Hansell, William W., Des Moines
 Hansen, Fred A., Red Oak
 Hansen, Niels M., Des Moines
 Hansen, Robert F., Forest City
 Hansen, Robert R., Marshalltown
 Hansen, Russell R., Storm Lake
 Hanske, Edward A., Bellevue
 Hanson, Frank H., Magnolia
 Hanson, Laurence C., Jefferson
 Hardin, John F., Bedford
 Hardin, Robert C., Iowa City (Camp Clai-borne, Louisiana)
 Hardwig, Oswald C., Waverly
 Harken, Conreid R., Osceola
 Harkness, Gordon F., Davenport
 Harlan, Martin E., Onawa
 Harman, Clarence, Whiting
 Harman, Dean W., Glenwood
 Harnagel, Edward J., Des Moines
 Harp, John F., Prairie City (L.M.)
 Harper, Edna K. S., Greenfield
 Harriman, Walter F., Sioux City
 Harrington, Arlan F., Cedar Rapids
 Harrington, Raymond J., Sioux City
 Harris, Clinton E., Grinnell
 Harris, Donald M., LeMars
 Harris, Grove W., Marshalltown
 Harris, Herbert H., Battle Creek
 Harris, Karl S., Iowa City (Camp Crowder, Missouri)
 Harris, Robert H., Mason City
 Harrison, Glenn E., Mason City (Little Rock, Arkansas)
 Hart, William E., Odebold
 Hartley, Byron D., Mt. Pleasant
 Hartman, Frank T., Waterloo (L.M.)
 Hartman, Howard J., Waterloo
 Hartung, Walter, Iowa City
 Hasek, Victor H., Cedar Rapids
 Hastings, John C., Elma
 Hatch, Alice H., Des Moines (L.M.)
 Haugen, Albert I., Ames
 Haumeder, Hans, New Hampton
 Haumeder, Maria E., New Hampton
 Havlik, Aloysius J., Tama (Mare Island, California)
 Hawkins, Emmet L., Council Bluffs
 Hawley, Olin B., Corning
 Hayek, John M., Des Moines
 Haygood, Marvin F., Des Moines
 Haymond, Harold E., Perry
 Hayne, Willard W., Paulina
 Hazard, Charles M., Arlington
 Hazlet, Kenneth K., Dubuque
 Heady, Conda C. C., Bloomfield (L.M.)
 Heald, Clarence L., Sigourney
 Healy, Maurice A., Boone
 Healy, Maurice J., Boone
 Heathman, Frank E., Pocahontas
 Hecker, Frederick A., Ottumwa
 Hecker, John T., Cedar Rapids
 Hedrecock, Lewis E., Hampton
 Heetland, Louis H., Sibley
 Heffernan, Chauncey E., Sioux City
 Hegz, Lester R., Rock Valley
 Heilman, Ernest S., Ida Grove (L.M.)
 Heise, Carl A., Jr., Missouri Valley
 Heitzman, Paul O., Burlington (Fort Leonard Wood, Missouri)
 Heles, John B., Dubuque
 Helgesen, Peter A., Lake Mills
 Henderson, Lauren J., Cedar Falls (Fort Ord, California)
 Henderson, Walker B., Oelwein (Fort Leonard Wood, Missouri)
 Hendrickson, Alvin H., Sioux City
 Henely, Edmund, Nora Springs
 Henkin, John H., Sioux City
 Hennes, Raphael J., Oxford
 Hennessy, Felix A., Calmar
 Hennessy, J. Donald, Council Bluffs
 Hennessy, Maurice C., Council Bluffs
 Henning, Garold G., Milford (Fort Lewis, Washington)
 Henry, Clyde A., Farson
 Henry, Hiram B., Des Moines
 Herman, John C., Boone
 Hermence, George E., Marshalltown
 Hermens, Paul J., Bronson
 Herny, Peter M., Prairie City
 Herrick, Thomas G., Gilmore City
 Herrmann, Christian H., Jr., Amana
 Herron, David A., Alta
 Hersch, Thomas F., Cedar Rapids
 Hersey, Nelson L., Independence
 Hess, Howard R., Cedar Rapids
 Hess, William C., Cresco
 Hessian, A. Laurence, Hartford, Connecticut
 Heusinkveld, Henry J., Jr., Clinton
 Hibbs, Fred V., Carroll
 Hickelooper, Carl B., Winterset
 Hickerson, Luther C., Brooklyn
 Hickman, Charles S., Centerville
 Hicks, Wayland K., Sioux City
 Hight, William B., Des Moines
 Hill, Christine S. E., Council Bluffs
 Hill, Don E., Clinton
 Hill, James C., Newton
 Hill, James W., Mt. Ayr
 Hill, Julia F., Pittsburgh, Pennsylvania
 Hill, Lee F., Des Moines
 Hills, Henry M., Lamoni (L.M.)
 Hills, Robert A., Russell
 Hinrichs, Robert G., Manson
 Hobart, Francis W., Lake City
 Hoegen, Joseph A., Wyoming
 Hoeven, Edward B., Ottumwa
 Hoffman, Paul M., Tipton
 Hoffmann, Alfred A., Waterloo
 Hofmann, William P., Davenport
 Hofstetter, George, Clinton (L.M.)
 Hogle, William M., Keokuk
 Holbrook, Francis R., Des Moines
 Hollis, Edward L., Marengo
 Holman, David O., Mason City
 Holman, Henry D., Mason City
 Holmes, Wilson W., Keokuk
 Holtey, Joseph W., Ossian
 Homan, Leo J., Riverside
 Hombach, Walter P., Council Bluffs
 Hombach, William P., Council Bluffs
 Hommel, Placido R. V., Elkader
 Honke, Edward M., Sioux City
 Hooper, Lester E., Indianola
 Hope, Justin M., Washington, D. C.
 Hornaday, William R., Des Moines
 Horton, Vincent J., Calmar
 Hosford, Horace F., Burlington
 Hospodarsky, Leonard J., Ridgeway
 Hotz, Edward J., Strawberry Point
 Houlaahan, Jay E., Mason City
 Houlihan, Francis W., Ackley
 Houlihan, Thomas J., Ida Grove (L.M.)
 Householder, Harold A., Winthrop
 Houser, Blanche W., Cedar Rapids
 Houser, Cass T., Cedar Rapids
 Houston, Bush, Nevada
 Hovendon, John H., Laurens
 Howar, Bruce F., Jewell (A. P. O., New York, New York)
 Howard, Fred H., Strawberry Point
 Howard, Lloyd G., Council Bluffs
 Howard, William H., Decorah
 Howe, James M., Hillsboro
 Howe, Lyle C., Muscatine
 Howell, Elias B., Ottumwa
 Howland, Charles F., Des Moines
 Hoyt, Charles N., Cedar Falls
 Hubbard, Frank A., Columbus Junction
 Hudek, Joseph W., Garnavillo
 Hughes, Robert O., Ottumwa
 Hull, Henry C., Jr., Washington (L.M.)
 Huntley, Charles C., Avoca
 Hurevitz, Hyman M., Davenport
 Huston, Daniel F., Burlington

- Huston, Herbert M., Ruthven
 Huston, Marshall D., Centerville
 Huston, Samuel W., Mt. Pleasant
 Hyatt, Charles N., Albia (L.M.)
 Hyatt, Charles N., Jr., Humeston
 Hyndman, Olan R., Iowa City
 Ihle, Charles W., Cleghorn
 Ihle, Charles W., Jr., Cleghorn (Fort Leonard Wood, Missouri)
 Ingham, Paul G., Mapleton
 Ingraham, David R., Sewall
 Irish, Thomas J., Forest City
 Isenberg, Bertice A., Lohrville
 Ivins, Harry M., Cedar Rapids
 Jackson, James M., Jefferson
 Jackson, James S., Mt. Pleasant
 Jackson, Robert L., Iowa City
 Jacoby, James A., Burlington
 Jaenicke, Kurt, Clinton
 James, Audra D., Des Moines (Great Lakes, Illinois)
 James, David W., Kamrar (Fort Riley, Kansas)
 James, Lora D., Fairfield
 James, Peter E., Elkhorn
 James, Roger A., Allison
 Jameson, Robert E., Davenport
 Janse, Phillip V., Algona
 Jansonius, John W., Eldora (Vancouver, Washington)
 January, Lewis E., Iowa City
 Jardine, George A., New Virginia
 Jarvis, Fred J., Oskaloosa
 Jarvis, Harry D., Chariton
 Jay, Leon D., Waverly
 Jeans, Philip C., Iowa City
 Jeffries, Roy R., Waukon
 Jenkins, George A., Albia
 Jenkins, George D., Burlington (Fort Dix, New Jersey)
 Jenkinson, Ernest A., Sioux City (L.M.)*
 Jenkinson, Harry R., Iowa City
 Jenks, Alonzo L., Jr., Des Moines
 Jensen, Arnold L., Council Bluffs (A. P. O., San Francisco, California)
 Jensen, Arthur E., Humboldt
 Jensen, Leroy E., Audubon
 Jepson, William, Sioux City (L.M.)
 Jerdee, Ingebrecht C., Clermont
 Jessup, Parke M., Muscatine
 Jinderlee, Joseph W., Cresco
 Jirsa, Harold O., Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Johann, Albert E., Des Moines
 Johnson, Aaron Q., Sioux City
 Johnson, Albert P., Sigourney (L.M.)
 Johnson, Aldis A., Council Bluffs
 Johnson, Chester H., Cherokee
 Johnson, George M., Marshalltown
 Johnson, Glenn R., Ottumwa
 Johnson, Harvey A., Atlantic
 Johnson, J. A. William, Newton
 Johnson, Jonathan, Alden
 Johnson, Melvin T., Lake Mills
 Johnson, Norman M., Clarinda
 Johnson, Robert J., Iowa Falls
 Johnson, William A., Alden
 Johnston, C. Harlan, Des Moines (Augusta, Georgia)
 Johnston, Florence D., Cedar Rapids
 Johnston, George B., Estherville
 Johnston, Harry L., Ames
 Johnston, Helen, Des Moines
 Johnston, Howard H., Hampton
 Johnston, Kenneth L., Oskaloosa
 Johnston, Thomas H., Spencer
 Johnston, Wayne A., Dubuque
 Johnstone, Alexander A., Keokuk
 Jones, Cecil C., Des Moines
 Jones, Charles L., Gilmore City
 Jones, Clare C., Spencer
 Jones, Harry J., Cedar Rapids
 Jones, Henry D., Schleswig
 Jones, Jesse I., Manchester
 Jones, Lewis H., Wall Lake (L.M.)
 Jones, Thomas S., Waukeee
 Jongewaard, Albert J., Jefferson
 Jongewaard, Jeannette, Jefferson
 Jordan, Carl F., Des Moines
 Jordan, John W., Maquoketa
 Jowett, John R., Clinton
 Joyner, Nevill M., Mobile, Alabama
 Joynt, Albert J., Waterloo
 Joynt, Martin J., Le Mars
 Joynt, Michael F., Marcus
 Judd, Addison L., Kanawha (L.M.)
 Junger, Emil C., Soldier
 Kaach, Harry F., Clinton
 Kabrick, Ola A., Grandview
 Kadel, Merl A., Tipton
 Kahler, Hugo V., Reinbeck
 Kanealy, John F., Iowa City
 Kaplan, David, Sioux City
 Kas, Thomas D., Sutherland
 Kassmeyer, John C., Dubuque
 Kast, Donald H., Des Moines
 Katherman, Charles A., Sioux City
 Kaufman, William A., Marshalltown
 Kaufman, Ernest L., Ft. Atkinson
 Keane, John L., Dubuque
 Keech, Roy K., Cedar Rapids
 Keeffe, Patrick E., Sioux City
 Keen, Berlin E., Des Moines
 Keeney, George H., Mallard
 Keislar, Henry D., Iowa City
 Keith, John J., Marion
 Kelley, Edmund J., Des Moines
 Kelley, Laurence E., Des Moines
 Kellogg, Orson A., Dows
 Kelly, Dennis H., Des Moines
 Kelly, Harry D., Council Bluffs
 Kelly, Joseph I., Burlington (L.M.)
 Kenefick, John N., Algona
 Kennedy, Charles S., Logan
 Kennedy, Edward M., New Hampton
 Kennedy, Edward P., Swaledale
 Kennedy, Elizabeth S., Oelwein
 Kennedy, William C., Somers
 Kepler, Earl C., Greene
 Kern, Lester C., Waverly
 Kerr, H. Dabney, Iowa City
 Kerr, Johnston H., Akron
 Kerr, William, Randolph
 Kerr, William H., Hamburg
 Kershner, Frank O., Clinton
 Kersten, Ernest M., Fort Dodge
 Kerwick, Joseph M., New Hampton
 Kessel, George, Cresco (L.M.)
 Kessell, James E., Des Moines
 Kestel, John L., Waterloo
 Kettelkamp, Enoch G., Monona
 Keyser, Ralph E., Marshalltown
 Kieck, Ernest G., Cedar Rapids
 Kiesau, Frederick W., Postville
 Kiesau, Milton F., Postville
 Kiesling, Harry F., Lehigh
 Kilgore, Benjamin F., Des Moines
 Kimball, John E., West Liberty
 Kimberly, Lester W., Davenport
 King, David H., Batavia
 King, Dean H., Spencer
 King, Harold N., Hampton, Virginia
 King, Oran W., Des Moines
 King, Ross C., Clinton
 Kingsbury, Charles L., Keokuk
 Kingsbury, Earl L., Keokuk
 Kirch, Walter A. W., Des Moines
 Kirkegaard, Smith C., Ringsted
 Kitson, Walter W., Atlantic
 Klein, John L., Muscatine (L.M.)
 Klein, John L., Jr., Muscatine
 Kleinberg, Henry E., Des Moines
 Kline, Samuel, Sioux City
 Klocksiem, Roy G., Odebolt
 Klok, George J., Council Bluffs
 Kluever, Herman C., Fort Dodge
 Knight, Benjamin L., Cedar Rapids
 Knight, Edson C., Garwin
 Knight, Russell A., Rockford
 Knipe, James B., Armstrong
 Knipfer, Robert L., Jesup
 Knoll, Albert H., Dubuque
 Knopf, Eugene J., Hubbard
 Knott, Peirce D., Sioux City
 Knott, Robert C., Sioux City
 Knowles, Fred L., Fort Dodge
 Knox, James M., Cedar Rapids
 Knudsen, Hubert K., Clinton
 Koch, Fred E., Burlington
 Koch, George W., Sioux City (L.M.)
 Koehne, Frederick D., Audubon (Oroville, Washington)
 Koeneman, Eugene O., Eldora
 Koob, William R., Brayton
 Kooiker, Herman J., Milford
 Koontz, Lyle W., Vinton
 Korfmacher, Edwin S., Grinnell
 Kornder, Louis H., Davenport
 Korns, Horace M., Iowa City
 Koser, Donald C., Cherokee
 Kottke, Elmer E., Des Moines
 Krakauer, Max, Davenport
 Kraus, Paul S., Cherokee
 Krause, Charles S., Cedar Rapids
 Krejsa, Oldrich, Cedar Rapids
 Krenning, Katherine S., Davenport
 Krepelka, George E., Osage
 Kreul, Dwight G., Davenport
 Kriebs, Frank J., Elkport
 Kriechbaum, Horace T., Davenport
 Krigsten, Joe M., Sioux City
 Krigsten, William M., Sioux City (Springfield, Missouri)
 Kruckenberg, William G., Mt. Vernon
 Kruse, Henry W., Rockford
 Kuhl, Augustus B., Davenport
 Kuhl, Augustus B., Jr., Davenport
 Kuhn, Leo C., Decorah
 Kuitert, John H., St. Cloud, Minnesota
 Kulp, Raymond R., Davenport
 Kuntz, George S., Sibley
 Kurth, Clarence J., Council Bluffs
 Kyle, William S., Washington
 Labagh, Nicholas W., Mystic
 Lacey, Thomas B., Glenwood
 LaDage, Leo H., Davenport
 Ladd, Fred G., Cedar Rapids
 La Force, Edward F., Burlington (L.M.)
 Lage, Raleigh H., Iowa City
 Laidley, Wallace G., Ogden
 Laird, John W., Mt. Pleasant
 Lamb, Frederick H., Davenport
 Lamb, Harry H., Davenport
 Lambach, Frederick, Davenport (L.M.)
 Lambert, Avery E., (Ph.D.), Iowa City
 Lampe, Elmer L., Bellevue
 Lande, Jacob N., Sioux City (Blackburn, England)
 Langford, William R., Epworth
 Langworthy, Henry G., Dubuque
 Lannon, James W., Clear Lake (Little Rock, Arkansas)
 Lapsley, Robert M., Keokuk
 Larimer, Robert N., Sioux City
 Larsen, Elmer A., Centerville
 Larsen, Harold T., Fort Dodge
 Larson, Andrew G., Dickens
 Larson, Eloise M., Deer Lodge, Montana
 Larson, John B., Laurens
 Larson, Lester E., Decorah
 Lashbrook, Elam E., Estherville*
 Laughhead, Charles A., Iowa City
 Laughlin, Ralph M., Tipton
 Launder, Frank T., Garwin, (L.M.)
 Launder, Lloyd H., Marshalltown
 Lawrence, Joseph W., Dubuque
 Lease, Nimrod J., Crawfordsville (L.M.)
 Lee, Gisle M., Thompson (L.M.)
 Leehey, Florance P., Oelwein
 Leehey, Paul J., Independence (Fort Ord, California)
 Leffert, Frank B., Centerville
 Lehman, Emery W., Des Moines
 Leighton, Lewis L., Fort Dodge
 Leik, Donald W., Dubuque
 Leinbach, Samuel P., Belmond
 Leinfelder, Placidus J., Iowa City
 Leiter, Herbert C., Sioux City
 Lekwa, Alfred H., Story City
 Lemon, Kenneth M., Oskaloosa
 Lenaghan, Robert T., Clinton
 Lenzmeier, Albert J., Davenport
 Leonard, Bertram B., Jr., Anthon
 Leonard, Earl R., Ocheyedan
 Leonard, Frederick S., Dubuque
 Leserman, Lester K., Rolfe (Fort Riley, Kansas)

- Lessenger, Ernest J., New London
 Lessenger, William S., Mt. Pleasant (L.M.)
 Lewis, Samuel J., Columbus Junction
 Lewis, William B., Webster City
 Lichter, Theodore W., Edgewood
 Liechty, Ernest J., Kingsley
 Lierle, Dean M., Iowa City
 Liken, John A., Creston
 Limbert, Edwin M., Council Bluffs
 Limburg, J. Irwin, Jefferson
 Limburg, John I., Jr., Jefferson
 Lincoln, Simon E., Des Moines
 Lindsay, Vernard T., Glidden
 Link, Martha A. M., Dubuque
 Linn, Ellis G., Des Moines
 Liska, Edward J., Ute
 Lister, Kenneth E., Chariton (Fort Snelling, Minnesota)
 Little, Luther W., Atkins
 Lloyd, John M., Washington
 Locher, Robert C., Cedar Rapids
 Lock, Arthur L., Rock Valley
 Lockhart, Harold A., Cedar Rapids
 Loekk, John F., Aurora
 Loes, Anthony M., Dubuque
 Lohman, Frederick H., Waterloo
 Lohmann, Carl J., Burlington
 Lohr, Oscar C., Churdan
 Lohr, Phillips E., Churdan
 Loizeaux, Charles E., Dubuque
 Long, Draper L., Mason City
 Longstreth, Clyde M., Atlantic
 Longwell, Freeman H., Iowa City (Rolla, Missouri)
 Longworth, Wallace H., Boone
 Losbrook, John F., Perry
 Loose, David N., Maquoketa (L.M.)
 Lorfeld, Gerhard W., Davenport
 Losh, Clifford W., Des Moines
 Lott, Guy A., Osage
 Lott, Robert H., Carroll
 Love, Francis L., Iowa City
 Lovejoy, E. Parish, Des Moines
 Lovelady, Ralph, Sidney
 Lovett, Charles E., Lineville
 Lovett, Earl D., Vinton
 Loving, Luther W., Estherville
 Lowder, William, Maquoketa*
 Ludwick, Arthur L., Jr., Waterloo
 Luehrsmann, Bernard C., Dyersville
 Luehrsmann, Bernard H., Dyersville
 Luginbuhl, Christian B., Des Moines
 Luke, Edward, Coin
 Lundvick, Arthur W., Gowrie
 Luse, Ralph F., Clinton
 Luthy, Karl R., Middleton
 Lutton, John D., Sioux City
 Lynch, Robert J., Des Moines
 Lynn, Arthur R., Marshalltown
 Lynn, Clarence E., Dubuque
 Lytle, Carl C., Dubuque
 MacDougal, Roderick F., Cedar Rapids
 MacEwen, Ewen M., Iowa City
 Mackie, Donald G., Charles City
 Mackin, M. Charles, Des Moines (L.M.)
 MacLeod, Hugh G., Greene
 Macrae, James G., Creston
 Madsen, Henry B., Richmond, Indiana
 Magaret, Ernest C., Glenwood
 Margarian, Sennacherib M., Des Moines
 Magee, Emery E., Waterloo
 Magoun, Charles E., Topeka, Kansas
 Mahin, Frank M., Ainsworth
 Maiden, Synder D., Council Bluffs
 Mailiard, Robert E., Watertown, New York
 Maire, Eugene J., Vail
 Maloy, Wayland H., Shenandoah
 Manahan, Charles A., Vinton
 Mantle, William B., Albion
 Mantz, Russell L., Cedar Rapids
 Maplethorpe, Charles W., Toledo
 Marble, Edwin J., Marshalltown
 Marble, Ira A., Sheffield
 Marble, Pearl L., Liscomb
 Marble, Willard P., Marshalltown
 Marek, Joseph E., Mason City
 Maresch, George, Burlington
 Margolin, Julius M., Perry
 Marinos, Harry G., Mason City
 Maris, Cornelius, Sanborn
 Maris, Gerrit, Hull
 Maris, William, Sioux Center
 Mark, Edwin M., Clarksville
 Marker, John L., Davenport (Fort Leonard Wood, Missouri)
 Marquis, Fred M., Waterloo
 Marquis, George S., Des Moines
 Marr, James, Silver City
 Marrs, Walford D., Tabor
 Marsh, William E., Eldora
 Marston, Charles L., Mason City
 Martin, George H., Eagle Grove
 Martin, Hobart E., Clinton
 Martin, James W., Holstein
 Martin, John F., Latimer
 Martin, Lee R., Council Bluffs (Burbank, California)
 Martin, Lorain M., Fort Dodge
 Martin, Ronald F., Sioux City
 Martin, Sidney D., Carroll
 Mason, Harry P., Wilton Junction*
 Mason, Stella M., Mason City
 Masson, Hervey F., Washington
 Mast, Truman M., Washington
 Mater, Dwight A., Knoxville (Scott Field, Illinois)
 Matheson, John H., Des Moines
 Mathias, John P., Mediapolis (L.M.)
 Mathiesen, Henning W., Indianapolis, Indiana
 Matthews, Damon G., Milton
 Matthews, Robert J., Clarinda
 Matthey, Carl H., Davenport
 Matthey, Walter A., Davenport
 Mattice, Lloyd H., Danbury
 Mattison, George, Jr., Akron
 Mauer, George A., Le Mars
 Mauer, Richard E., Laurens
 Mauritz, Emory L., Des Moines
 Maxwell, Charles T., Sioux City
 Maxwell, George B., Davenport
 Maxwell, John, What Cheer
 May, George A., Des Moines
 McAllister, James, Odebolt
 McArdle, G. Prentiss, Fort Dodge
 McBride, James T., Des Moines
 McBride, Robert H., Sioux City
 McBurney, George F., Belmond
 McCaffrey, Eugene H., Des Moines
 McCall, John H., Allerton
 McCarl, J. Jay, Sac City
 McCarthy, Frank D., Sioux City
 McCartney, William H., Des Moines
 McCauliff, Guy T., Webster City
 McClean, Earl D., Des Moines
 McClintock, John T., Iowa City (L.M.)
 McClure, Ernest C., Bussey (L.M.)
 McClure, Gail A., Ames
 McClurg, F. Haven, Fairfield
 McConkie, Edwin B., Cedar Rapids (Jefferson Barracks, Missouri)
 McConkie, Willis L., Carroll
 McConaughay, James T., Mount Pleasant
 McCoy, Harold J., Des Moines (Iowa City)
 McCrary, Warren E., Lake City
 McCrae, Eppie S., Eddyville
 McCreedy, Murry L., Brighton
 McCreery, John W., Whittemore
 McCreight, George C., Des Moines
 McCuistion, Harry M., Sioux City
 McDannell, John, Nashua
 McDonald, Donald J., Des Moines
 McDonald, James E., Mason City (L.M.)
 McDowell, Gilbert T., Gladbrook
 McDowell, William O., Grundy Center
 McElderry, Donald, Wilton Junction
 McFadden, Irma M., Dubuque
 McFarland, Guy E., Ames
 McFarland, Guy E., Jr., Ames
 McFarland, Julian E., Ames
 McGilvra, Ralph I., Chicago, Illinois
 McGowan, James P., Harlan
 McGrane, Merle J., New Hampton
 McGrath, William J., Elkader
 McGready, Joseph H., Independence (L.M.)
 McGuire, Kenneth L., Richland
 McGuire, Roy A., Fairfield
 McHugh, Charles P., Sioux City
 McKean, Alexander C., Ladora
 McKean, Frank F., Allison
 McKee, Albert P., Iowa City
 McKee, Thomas L., Keokuk (Fort Dix, New Jersey)
 McKirahan, Josiah R., Wayland
 McKitterick, John C., Burlington (Chicago, Illinois)
 McLaughlin, Charles W., Washington
 McMahon, George T., Waukeee
 McMahon, Thomas, Lawler (L.M.)
 McManus, Joseph P., Graettinger
 McMeans, Thomas W., Davenport
 McMillen, Arch S., Fort Dodge
 McMurray, Edward A., Newton
 McNamara, Frank P., Dubuque
 McNamee, Jesse H., Des Moines
 McNaughton, Luther D., Eagle Grove
 McPherrin, Henry I., Des Moines
 McQuillen, Charles W., Charles City
 McQuiston, J. Stuart, Cedar Rapids
 McTaggart, William B., Havelock
 McVay, Melvin J., Lake City
 Mead, Frank N., Cedar Falls (L.M.)
 Meany, John F., Rockwell
 Meentz, Diedrich J., Fort Madison
 Meffert, Clyde B., Cedar Rapids
 Meggers, Edward C., McGregor
 Megorden, William H., Mount Pleasant
 Mehler, Frank R., New London
 Melgaard, Bennett A., Sioux City
 Mellen, Robert G., Clinton
 Melrose, Maurice C., Independence
 Mengert, William F., Iowa City
 Mercer, Clifford D., West Union
 Meredith, Loren K., Des Moines
 Mereness, Herbert D., Dolliver
 Merkel, Arthur E., Des Moines
 Merkel, Byron M., Des Moines (Ellington Field, Texas)
 Merrick, John H., Maxwell
 Merrill, Charles H., Oskaloosa
 Merrill, Nelson, Marshalltown
 Merritt, Arthur M., Des Moines
 Mershon, Clinton E., Adel (L.M.)
 Meyer, Alfred K., Clinton
 Meyer, George R., Marshalltown (L.M.)
 Meyer, Milo G., Marshalltown
 Meyers, Frank W., Dubuque
 Meyers, Henry A., Davenport
 Michel, Bernard A., Dubuque (L.M.)
 Mikelson, Clarence J., Osceola
 Miller, Brownlow B., Tabor
 Miller, Chester I., Iowa City
 Miller, Donald F., Williamsburg
 Miller, Enos D., Wellman
 Miller, Johannes J., Ackley
 Miller, Lawrence A., North English
 Miller, Oscar H., Estherville
 Miller, Temple M., Muscatine
 Miller, Wilbur R., Iowa City
 Miller, William B., Centerville
 Millie, Glenn S., Batte Creek
 Mills, Ernest M., Legrand
 Mills, Frank W., Ottumwa
 Miltner, Leo J., Davenport
 Minassian, Harootune A., Des Moines
 Minassian, Thaddeus A., Des Moines
 Miner, James B., Jr., Charles City
 Miner, James B., Sr., Charles City (L.M.)
 Missman, Walter F., Klemme
 Mitchell, Claire H., Indianola
 Moen, Harry P., West Union
 Moen, Stanley T., Hartley (Los Angeles, California)
 Moerke, Robert F., Burlington
 Moershel, Henry G., Homestead
 Moes, Matthew J., Dubuque
 Mol, Henry L., Grundy Center
 Montgomery, Earl C., Atlantic
 Montgomery, Guy E., Keota
 Moon, Barclay J., Cedar Rapids
 Mooney, Felix P., Jewell
 Mooney, James C., Independence
 Moore, Daniel V., Sioux City
 Moore, Edson E., Camp Lee, Virginia
 Moore, Gage C., Ottumwa
 Moore, Harold H., Ottumwa

- Moore, Harris C., Martelle
 Moore, Jesse C., Eldon
 Moore, Morris, Walnut
 Moore, Pauline V., Iowa City
 Moorhead, Giles C., Ida Grove (L.M.)
 Moorehead, Harold B., Underwood
 Moran, Thomas A., Melrose
 Morden, Richard P., Des Moines
 Morden, Roy R., Des Moines
 Morgan, Earl E., Sioux City
 Morgan, Fred B., Clinton
 Morgan, Harold W., Mason City
 Morganthalier, Otis P., Templeton
 Moriarty, John F., Rock Rapids (Fort Leonard Wood, Missouri)
 Moriarty, Lauren R., Villisca
 Morris, Zenella N., Stockport (L.M.)
 Morrison, Edward D., Fort Dodge
 Morrison, John R., Carroll (Fort Leonard Wood, Missouri)
 Morrison, John W., Alta
 Morrison, Orry C., Carroll
 Morrison, Roland B., Carroll
 Morrison, Wesley J., Cedar Rapids
 Morse, Charles H., Eagle Grove (L.M.)
 Morton, Matthew T., Estherville
 Mosher, Martin L., Jr., West Branch
 Moskovitz, Julius M., Council Bluffs
 Moth, Robert S., Council Bluffs
 Mott, William H., Farmington
 Moulton, Milo W., Bellevue
 Mountain, Elmer B., Des Moines
 Mountain, George E., Des Moines
 Mueller, Emil F., Dyersville
 Mueller, James A., Fenton
 Muensch, Virgil O., Nichols
 Mugan, Robert C., Sioux City
 Muhs, Emil O., Muscatine
 Mullmann, Arnold J., Adel
 Mulswow, Frederick W., Cedar Rapids
 Mumma, Claude S., Santa Monica, California
 Munden, Ralph E., Cedar Rapids
 Munger, Elbert E., Spencer
 Munger, Elbert E., Jr., Spencer
 Murchison, Kenneth, Sidney
 Murphy, Arlo L., Fredericksburg (Panama Canal Zone)
 Murphy, Cornelius B., Alton
 Murphy, George C., Waterloo
 Murphy, James H., Des Moines
 Murphy, Joseph J., Cedar Rapids
 Murray, Frederick G., Cedar Rapids
 Murray, Jonathan H., Burlington
 Murtaugh, James E., Charles City
 Myers, Edward M., Woodward
 Myers, Judson W., Postville
 Myers, Kermit W., Sheldon
 Nagyfy, Stephen F., Iowa City
 Nash, Edwin A., Ottumwa
 Nauman, Ernest C., Waterloo
 Neal, Emma J., Cedar Rapids
 Nederhiser, Morgan I., Cascade
 Needles, Roscoe M., Atlantic
 Negus, Cora W., Keweenaw
 Nelken, Leonard, Clinton
 Nelken, Viola D., Clinton
 Nelson, Arnold L., Des Moines
 Nelson, Carroll C., Red Oak
 Nelson, Fred L., Ottumwa
 Nelson, Frederick L., Jr., Ottumwa
 Nelson, Harry E., Dayton
 Nelson, Ira D., Toledo
 Nelson, Leo D., Jefferson
 Nelson, Paul O., Emmetsburg
 Nelson, Robert J., Clinton
 Nemec, Joseph J., Cedar Rapids
 Nesler, Alfred B., Dubuque
 Netolicky, Joseph Y., Solon
 Netolicky, Robert Y., Cedar Rapids
 Netolicky, Wesley J., Cedar Rapids
 Neu, Harold N., Sac City (Jefferson Barracks, Missouri)
 Neufeld, Frank, Davenport
 Neufeld, Robert J., Davenport
 Neuzil, William J., Cedar Rapids
 Newell, William C., Ottumwa
 Newland, Don H., Belle Plaine
 Newland, Elmer R., Drakesville
 Newlove, Frank E., Batavia, New York
 Newman, Cloyce A., Bode
 Newman, Robert W., Iowa City (Upper Darby, Pennsylvania)
 Newport, Pearce E., Clarinda
 Newton, Dennis L., Fort Madison
 Niblock, George F., Derby
 Nicholson, Clyde G., Spirit Lake
 Nicoll, Charles A., Panora
 Nicoll, David T., Mitchellville
 Niehaus, Ralph F., Iowa City
 Nielsen, Rudolph F., Cedar Falls
 Nielsen, Arthur L., Harlan
 Niemann, Theodore V., Brooklyn
 Nierling, Paul A., Cresco
 Noble, Earl H., Clemons
 Noble, Frederick W., Fort Madison
 Noble, Harold F., Fort Madison
 Noble, Lloyd E., Rhodes
 Noble, Nelle S., Des Moines
 Noble, Rusl P., Cherokee
 Noé, Carl A., Cedar Rapids
 Noé, Charles F., Amana (L.M.)
 Nolan, Charles J., Dubuque
 Nomland, Ruben, Iowa City
 Noonan, James J., Marshalltown
 Nord, Donald H., Cambridge
 Norment, John R., Clinton (Mare Island, California)
 North, Frank R., Winfield
 Norton, Alva C., Rockwell City (L.M.)
 Norton, Vera V., Waverly
 Noun, Louis J., Des Moines
 Noun, Maurice H., Des Moines
 Nourse, Leslie M., Des Moines
 Null, Frederick F., Hawarden
 Nyquist, David M., Eldora
 Nysewander, Christian, Des Moines (L.M.)
 Ober, Frank G., Burlington
 Obermann, Charles F., Cherokee
 O'Brien, Cecil S., Iowa City
 O'Brien, Stephen A., Mason City
 O'Connor, Edwin C., Alta Vista
 Odell, Isaac H., Des Moines
 O'Donoghue, Arch F., Sioux City
 O'Donoghue, James H., Storm Lake
 Oelrich, Carl D., Sioux Center
 Oggel, Herman D., Maurice
 O'Keefe, John E., Waterloo (L.M.)
 O'Keefe, Paul T., Waterloo
 Okerlin, Oscar W., Essex
 Oldag, George C., Paullina
 O'Leary, Francis B., George
 Olsen, Martin I., Des Moines
 Olson, Evelyn M., Winterset
 Olson, Paul F., Dubuque (Bremerton, Washington)
 Olson, Russell L., Northwood
 O'Neal, Harold E., Tipton (Pine Camp, New York)
 Osborn, Clarence R., Dexter
 Osincup, Paul W., Sioux City
 Osnes, Elias N., Albany, California
 Osten, Burdette H., Northwood
 O'Toole, Laurence C., Le Mars
 O'Toole, Thomas J., Eagle Grove
 Ott, Martin D., Davenport
 Otto, Paul C., Fort Dodge
 Overton, Lewis M., Des Moines
 Owen, William R., Osage
 Pace, Arthur A., Toledo (L.M.)
 Padgham, John T., Grinnell
 Page, Addison C., Des Moines (L.M.)
 Pagelsen, Otto H., Iowa Falls
 Pahlas, Henry M., Dubuque
 Paige, Ralph T., La Porte City
 Painter, Jesse C., Dubuque
 Palmer, Carson W., Guttenberg
 Panzer, Edward J. C., Stanton
 Paragas, Modesto R., Creston
 Parish, John R., Grinnell
 Parish, Ora F., Grinnell (L.M.)
 Park, Elmer R., Sioux City
 Parke, John, Cedar Rapids
 Parker, Bernard B., Centerville
 Parker, Edward S., Ida Grove (L.M.)
 Parker, James D., Fayette
 Parker, Robert L., Des Moines
 Parker, William W., Floris
 Parry, Roy E., Scranton
 Parsons, Harry C., Grinnell
 Parsons, Irving U., Malvern (L.M.)
 Parsons, John C., Des Moines
 Parsons, Percival L., Traer
 Paschal, George A., Williams
 Pascoe, Paul L., Carroll
 Patterson, Alpheus W., Fonda
 Patterson, John N., Burlington (L.M.)
 Patterson, Roy A., Webster City
 Paul, John D., Anamosa
 Paul, William D., Iowa City
 Paulsen, Herbert B., Harris
 Paulus, Edward W., Iowa City (Camp Claiborne, Louisiana)
 Payne, Rosewell H., Exira
 Pearlman, Leo R., Des Moines
 Pearson, George J., Burlington
 Pearson, William W., Des Moines
 Peart, John C., Davenport
 Pease, Herbert, Alta Vista
 Peasley, Harold R., Des Moines
 Peck, John H., Oakdale
 Peck, Raymond E., Davenport
 Peek, Levin H., Lake City (St. Louis, Missouri)
 Peisen, Conan J., Des Moines
 Pence, James W., Columbus Junction
 Penn, Eugene C., West Des Moines
 Pennington, Love E., Independence
 Pennington, Veronica M., Independence
 Perkins, Franklyn C., Hedrick
 Perkins, Rolla W., Sioux City
 Perley, Arthur E., Waterloo
 Peschau, Waldo E., Cedar Rapids
 Peters, Fletcher E., Defiance
 Petersen, Emil C., Atlantic
 Petersen, Millard T., Atlantic
 Petersen, Vernon W., Iowa City (Camp Claiborne, Louisiana)
 Peterson, August J., Forest City
 Peterson, Evan A., Burlington
 Peterson, Frank R., Iowa City
 Peterson, Ray W., Clear Lake
 Petty, Wallace S., Lincoln, Nebraska
 Pfannebecker, William, Sigourney (L.M.)
 Pfeiffer, Eric P., Des Moines
 Pfeiffer, Ernst, Hartley
 Pfeiffer, Harry E., Cedar Rapids
 Pfohl, Anthony C., Dubuque
 Phelps, Richard E. H., State Center
 Phillips, Albin B., Clear Lake (L.M.)
 Phillips, Allan B., Des Moines (Corpus Christi, Texas)
 Phillips, Clarence P., Muscatine
 Phillips, Isaac H., Missouri Valley
 Phillips, Jesse H., Montezuma (L.M.)
 Phillips, Norman W., Clear Lake (L.M.)
 Phillips, Walter B., Montezuma
 Pickard, John C., Dubuque
 Piekenbrock, Frank F., Dubuque
 Piercy, Kenneth C., Ames
 Pierson, Lawrence E., Sioux City
 Plankers, Arthur G., Dubuque
 Plass, Everett D., Iowa City
 Plimpton, Robert P., Denison
 Plummer, George A., Cresco
 Poepsel, Frank L., West Point
 Pollock, Roscoe, Douds-Leando
 Pope, John M., Cherokee
 Porstmann, Louis J., Davenport
 Porter, Charles E., Redfield
 Porter, Clarence M., Woodward
 Porter, Robert J., Des Moines
 Porter, Samuel D., Grinnell
 Posner, Edward R., Des Moines (L.M.)
 Powell, Burke, Albia (L.M.)
 Powell, Lester D., Des Moines (San Diego, California)
 Powell, Robert A., Farragut
 Powell, Velura E., Red Oak
 Powers, Francis E., Boone
 Powers, Henry R., Emmetsburg
 Powers, Ivan R., Waterloo
 Powers, Joseph C., Hampton
 Preece, Wade O., Waterloo
 Prentice, George L., Troy
 Prentiss, Robert J., San Diego, California
 Presnell, J. William, Scranton

- Presnell, William H., Charlotte
 Pretyman, Oscar R., Manson
 Prewitt, Leland H., Ottumwa
 Price, Alfred S., Des Moines
 Priessman, Frank A., Keokuk
 Priestley, Joseph B., Des Moines
 Pringle, Jesse A., Bagley (L.M.)
 Proctor, Rothwell D., Cedar Rapids
 (Corpus Christi, Texas)
 Prouty, James V., Cedar Rapids
 Ptacek, Joseph L., Webster City
 Pumpfrey, Loira C., Keokuk (Fort
 Leavenworth, Kansas)
 Purcell, Bert E., Iowa Falls
 Putnam, Chester L., Manchester
 Quinn, Francis P., Dubuque
 Ralston, Furman P., Knoxville
 Rambo, Cyrus C., Creston
 Rambo, David T., Ottumwa
 Rambo, Eli F., Webster City
 Randall, John H., Iowa City
 Randall, William L., Hampton
 Rankin, Isom A., Iowa City
 Rankin, John R., Keokuk
 Rankin, William, Keokuk
 Ransom, Harry E., Des Moines
 Rarick, Ivan H., Sioux City (Soquel,
 California)
 Rasmussen, Carl C., Des Moines
 Rater, David L., Ottumwa
 Rathe, Herbert W., Waverly
 Rausch, Gerald R., Clarinda
 Ravitts, Joseph L., Montezuma
 Raw, Elmer J., Pierson
 Rawson, Elwin G., Anamosa
 Redmond, James J., Cedar Rapids (Camp
 Claiborne, Louisiana)
 Redmond, Thomas M., Monticello
 Reed, Andrew L., Estherville
 Reed, Guy P., Davis City (L.M.)
 Reed, Paul A., Iowa City
 Reed, Roe B., Clearfield
 Reeder, James E., Sioux City
 Reeder, James E., Jr., Sioux City
 Reiley, William S., Red Oak
 Reimers, Robert S., Fort Madison
 Reinisch, Edward L., Dubuque (L.M.)
 Reinsch, Frank, Ashton
 Render, Norman D., Clarinda
 Rendleman, William H., Davenport
 Reuber, Roy N., Mason City
 Reuling, Frank H., Waterloo
 Reynolds, Albert C., Mingo
 Reynolds, Earl O., Greenfield
 Rice, Floyd W., Des Moines
 Richards, Frank O., Winterset
 Richardson, Leon F., Collins
 Richmond, Arthur C., Fort Madison
 Richmond, Frank R., Fort Madison
 Richmond, Paul C., New Hampton
 Richter, Harold J., Albia
 Ridenour, Joseph E., Waterloo
 Riegelman, Ralph H., Des Moines (Camp
 Grant, Illinois)
 Rieniets, John H., Cedar Rapids
 Riggert, Leonard O., Clinton
 Riggle, Frank P., Cedar Rapids
 Riley, John, Exira (L.M.)
 Rimel, George W., Bedford
 Ringena, Engelje J., Brooklyn
 Rinker, George E., Oto
 Ristine, Leonard P., Mt. Pleasant
 Ritter, John F., Maquoketa
 Rizzo, Frank, Sibley
 Robb, James B., Chariton
 Roberts, Charles R., Dysart
 Roberts, Francis L., Spirit Lake
 Roberts, Francis M., Knoxville
 Roberts, Justus B., Ottumwa
 Robertson, Andrew A., Council Bluffs
 Robertson, Treadwell A., West Liberty
 Robinson, Robert E., Waverly
 Robinson, Van C., Des Moines
 Rock, John E., Davenport
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 Ward, Donovan F., Dubuque
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DIFFERENTIAL DIAGNOSIS OF MENINGEAL IRRITATIONS*

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I want to call your attention to the fact that there are many types of meningeal irritations. Any bacteria that could cause a disease in the human system could cause meningeal irritation. Whenever we hear the term meningitis, we unconsciously think of epidemic meningitis, although this is not the most common type of meningeal irritation. Out of 3,000 cases of meningitis which we have had in the last twenty years, over half have been due to tuberculosis; only approximately twenty-five per cent fell in the category of epidemic meningitis. Therefore, when you have a case of meningitis, on the basis of arithmetical probability, you are dealing with tuberculosis. Toxins may cause meningitis; or it may be due to virus diseases, products of heavy metals, mechanical vessel obstruction and metabolic conditions; there are pseudomeningeal irritations as well.

What may these meningeal irritations be due to? They may be due to all types of organisms in the bacterial sense; staphylococcus, streptococcus or meningococcus. We think that tuberculous bacilli, tetanus and influenza may produce toxins and cause meningeal irritations as well as all of the virus diseases.

The realm of virus disease has been extended in the past ten years; in fact, here in Iowa equine encephalomeningitis has been definitely on the increase. It was a curiosity about five or six years ago; now it is a clinical entity. A benign meningeal irritation was a curiosity ten years ago, although now it occurs commonly.

Meningeal irritations may be secondary to mechanical block, such as thrombosis of vessels, where there is edema, where there is a tumor with back pressure, or where there is an inflammatory process in one of the bones of the skull with a

secondary extension, as sometimes occurs in mastoiditis.

Pseudomeningeal irritations are very irritating at times, especially from the standpoint of physical diagnosis. Metabolic disturbances may cause meningeal irritations. Uremia commonly may be ushered in by convulsions; almost the first symptom following acute infection, sometimes two or three weeks after, may be uremic convulsions. If the individual has infected ears, especially after scarlet fever, one should not conclude too hastily that there is a meningeal spread.

The most common toxins are the unknown ones, the ones which cause infective polyneuritis or, a better term, the peripheral neuropathies. I do not believe that acute and primary meningeal irritations exist. Acute diseases, like tuberculosis, do not start in the brain *per se*. For instance, there may be a primary infection in a gland draining the lung, in tuberculosis, or there may be a primary septicemia in epidemic meningitis with the meningitis a secondary phenomenon. Neither do we believe that primary chronic lesions exist in the brain any more than do primary acute ones, although they are mentioned in the textbooks; but there may be a chronic infection, such as tuberculosis, secondary to some acute or chronic disease elsewhere. In meningitis there is always some acute or chronic disease elsewhere, and the condition in the meninges is secondary to these conditions.

Irritations of the central nervous system are associated with certain types of cellular reactions, such as lymphocytes or leukocytes. Diseases produce a pus or a non-pus cellular reaction. If it is a pus-producing organism, the infection is caused by certain groups of bacteria; if it is not pus-producing the infection will be due to another group of organisms, and at once we have the means of general separation. The differential diagnosis of meningitis rests upon a consideration of the neurologic changes which appear in the patient; the appearance of the patient himself; simple things, such as temperature, pulse and respirations; and

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the history of the illness. Finally, of course, the most important bit of evidence is the spinal fluid findings.

A word should be said about the patient. How does he appear? Is he alert or is he somnolent? Epidemic meningitis causes death early or late. If it is sudden, it may occur within twelve to twenty-four hours after the onset of the disease. In those cases the patient is sensitive to the toxins produced by the organism and dies as a result of this toxicity. These cases are practically never diagnosed and the patients are usually moribund from the start. On the other hand, the ordinary patient with epidemic meningitis, despite the fact that a half ounce of pus is drained off with the spinal fluid, is keenly alive to his surroundings. He can tell us almost the exact moment he became ill. This is in contrast to the dull, apathetic type of child with encephalitis, the child who lies with vacant eyes, gazing into space, and the child who is simply wildly disoriented. Patients with tuberculous meningitis become ill slowly with no temperature rise, and they progress for perhaps seven to fourteen days before they have the slightest temperature reaction. They usually have no pain or symptoms other than lethargy. They finally lapse into a somnolent state, the temperature starts to rise, and the end appears in sight. The patient with a mixed infection or a pyogenic infection of any kind, except epidemic meningitis, lies almost moribund.

The temperature may be helpful in the diagnosis. In tuberculosis, which is responsible for fifty per cent of the cases of meningitis, there is a low temperature which gradually rises, sometimes to unbelievable heights just as the individual develops signs of somnolence. It may go as high as 106 to 110 degrees just before death, but during the course of the preliminary stage of meningeal irritation the temperature may not be increased. All pyogenic infections are characterized by a sudden rise in temperature. In epidemic meningitis, for instance, a child may start to get sick at four o'clock in the morning and by eight o'clock in the morning the temperature may be 104 or 105 degrees. It is only moderately high in encephalitis, probably not over 101 degrees.

The pulse is very distinctive at times. It is often slow and irregular in late tuberculosis. Because of this fact, years ago Biot described his syndrome, a marked slowing of the respiratory rate, and he stated that it was pathognomonic of tuberculous meningitis. This is not true. We know now that Biot's type of respiratory curve, where there is a period of apnea, followed by hyperpnea, is not pathognomonic of tuberculous meningitis, but is pathognomonic of a marked irri-

tation at the base of the skull. Of course, inasmuch as tuberculous meningitis is most common, this is the most common cause. There is a fast pulse in practically every patient with pyogenic meningitis. Wherever there is this type of respiratory involvement there is a basilar disease. Finkelstein called attention to this some time ago. Despite the fact that there is a marked high temperature, the pulse will be slow which is most curious, and quite in contrast, for instance, to the reaction we see in poliomyelitis. There we have the same effect we would have if we should cut both vagi. There is a fast pulse rate and a slow respiratory curve, a crossed response. The pulse goes up and the respiratory curve goes down, which signifies that the patient has a dorsal vagal nuclei involvement, that the extension has gone from the nerve to the bulb and that the patient probably will die.

The toxic type of epidemic meningitis has a high mortality rate. There is an element of toxicity in all patients who have epidemic meningitis. It is not usually great and in the uncomplicated septic type of case, which is the ordinary type of epidemic meningitis, the mortality rate is not high; indeed with proper therapy it is very low. In the last seventy-one patients (new) whom we have seen in the hospital with epidemic meningitis, from a baby two months old to a man eighty-two years of age, all have lived and we have not had a complication of deafness or loss of sight.

Those individuals with pyogenic infections of either staphylococcus or streptococcus origin will die unless treatment is begun immediately, and even then they may die. Much depends upon the type of infection and one must make every effort to determine the organism with which he is dealing. Staphylococcus causes a very severe type of meningitis despite therapy. No more than ten to twenty per cent will respond, despite the very optimistic reports in the literature. Streptococcus meningitis responds beautifully. In 1936 we had thirteen cases of streptococcus meningitis and all but one died; in 1938 we had twelve cases of streptococcus meningitis and not one died. We treated them with massive amounts of sulfanilamide.

In influenza an occasional patient may live. This is an advance when we reflect that previously one hundred per cent died after any type of therapy. The mortality rate in tuberculous meningitis is still one hundred per cent despite therapy. In luetic meningitis the results depend upon severity and duration of the infection.

The history of the illness is very important, because it rules out tuberculous meningitis. A

child with meningitis does not want to play around the yard for two or three days. Then he does not want to get up; he wants to lie around for two or three days more. He has no pain and no headache. Eventually it is hard to wake him for his meals. He does not want to eat. Finally, after ten days to two weeks, the child lapses into unconsciousness and the parents then realize they have a severely ill child; the temperature and pulse rate begin to rise. It is a gradual onset, but there may be exceptions, especially in the adults, who may have marked headaches.

The onset in pyogenic meningitis is abrupt. It begins immediately with headache and symptoms of cerebral irritations, such as vomiting, high fever, etc. This practically always occurs in meningitis.

The neurologic changes in this condition are important. One of the first to be noted is Kernig's sign. We find that we cannot straighten the leg out as it is flexed over the abdomen. When we try this maneuver, the other leg also flexes. That is a Brudzinski sign. We may get a modified Kernig's sign by placing the hand back of the neck and pulling the head forward. Both legs will flex. There may be a stiff neck, a bowed back and marked hyperactivity of the reflexes. The eye-ground examination is worthless. Neither do we think the Queckenstedt maneuver of much aid because there are so many exceptions to its interpretation. These are the signs in the full-blown case of pyogenic meningitis. The important thing is not to know that these signs are present, but to know the chronologic order and presence of those signs. Are they permanent? Were they there this morning, this afternoon and will they be present tomorrow morning? This is important, because in every case of pyogenic infection, including epidemic meningitis, once the meningeal signs occur, they remain and are permanent acquisitions until the patient is better. The stiff neck may remain for as long as six months after an attack of epidemic meningitis. Usually, however, it disappears in about two weeks.

Are the signs changeable? Did you visit the patient in the morning and find him with all signs of a neurologic entity and come back in the afternoon to find the child lying loose, comfortable and quiet? If you did, you are not dealing with a pyogenic infection or a meningeal irritation. If the child loses these meningeal responses, if he has them one minute and not the next minute, he does not have a meningeal irritation in the strict sense of the word, with one exception which I will mention in a moment.

When we see bizarre responses, that is, reflexes in the morning and none in the afternoon, and

in a patient with numerous kinds of neurologic reactions, in the absence of all other evidence, that case is a tuberculous meningitis until proved otherwise. There is no other clinical disease of the meninges which presents such bizarre neurologic responses as tuberculous meningitis. The eye signs, the development of the chameleon-like eye, one pupil looking up one way and the other one another way confirms the diagnosis.

There may be a mixed upper motor neuron and meningeal lesion. Some patients with poliomyelitis always have some irritation. Some patients with encephalitis may have an irritated meningitis. Whenever there are upper motor neuron lesion signs, one should make this diagnosis, despite the signs of meningitis. However, there are exceptions. In babies one simply cannot diagnose meningitis by objective examination. Those under six months may begin with vomiting, high fever and somnolence, and the only other clinical sign is a bulging fontanel. Most of these children at this age will not develop any signs of meningeal irritation despite the etiology. On the other hand, children over that age practically always have the signs of meningeal irritation previously mentioned.

I want to call your attention briefly to the signs of lower motor neuron involvement. There may be a decrease in the superficial reflexes, an increase or decrease in the normal reflexes, no pathologic reflexes, a reaction to degeneration and atrophy. On the other hand, in an upper motor neuron lesion, there is a possible decrease in superficial reflexes, an increase of normal reflexes, the finding of pathologic reflexes and possibly some pathologic signs. The real differentiation consists in the finding of pathologic signs in the one, and the lack of signs in the other.

The spinal fluid findings constitute the most important bit of evidence. One must know the pressure in order to avoid possible difficulty. There may be a tumor and if too much pressure is relieved the tumor may push the base of the brain down, the bulb, etc., into the foramen magnum and the patient may die. The color of the spinal fluid is very important. It should be examined against both white and dark backgrounds because in this way one can detect faint xanthochromia. For instance, a patient may have been struck on the head some time before examination and the bleeding may have been absorbed leaving some xanthochromia. This may be the only clue as to the type of meningitis or irritation. If the spinal fluid is opaque, if it is cloudy, faintly yellow, leukocytic cells are present. If it is dead white, lymphocytes are probably present.

The cell count is very important, and I would stress the point that a proper differential count

cannot be made by looking under a counting chamber. One must know if he is dealing with leukocytes or lymphocytes. If the former we know at once that we have a pyogenic infection. There are only two exceptions; first, there is equine encephalitis, which may give a leukocytic reaction at first; and second, there is tuberculous meningitis where there may be a leukocytic response which turns into a lymphocytic increase within twenty-four or forty-eight hours. If there is a leukocytic response and if the three exceptions mentioned can be ruled out, the diagnosis can definitely be pyogenic infection. On the other hand, if there is a lymphocytic response, the case is a chronic type of infection, lies or tuberculosis, or some form of encephalitic reaction or poliomyelitis. There is only one exception and that is a deep-seated abscess, in which a lymphocytic response may be obtained due to irritation. This type of reaction gradually changes as the abscess grows and approximates the cortex, so that eventually the spinal fluid type of cell will be practically pure leukocytic.

The organisms must be differentiated carefully. The examination should be done in a thorough and leisurely manner. The quick decolorizing agents, such as acetone, ether or acetone alcohol should not be used. The old-fashioned ninety-five per cent alcohol is advised.

The protein content is important, because the protein content shows immediately how much damage has been done to the central nervous system. If the individual has a marked increase in protein, the patient is seriously ill. On the other hand, an individual with perhaps 1,000 cells and a one plus minus Pandy reaction is not very ill.

The sugar content is important from the standpoint of tuberculosis, but the sugar content of the spinal fluid should never be estimated without a simultaneous estimation of the blood sugar content as well.

I have ten slides which will illustrate the practical application of some of these points.

Case 1. This man, fifty-one years of age, was a musician. We saw him in consultation, in order to determine the dose of meningitis serum they wanted to give for epidemic meningitis. Lumbar puncture was done in the morning. The spinal fluid contained 40,000 cells. All of the cells were polymorphonuclears. We could find no organisms and there was no increase in pressure. I saw him at one-thirty. About one o'clock they had done a second puncture and found that he had 1,000 cells or less, all still polymorphonuclears. There were no organisms and no increase in pressure. He had all the neurologic signs of meningitis, which had been present for one week. He had

a high temperature, a high pulse and a very irregular respiratory rate. Unquestionably he had meningeal irritation. I did not think this patient had epidemic meningitis despite the fact that he had a marked increase in leukocytes and no organisms present. The old rule is this: if we have an individual with a marked increase in leukocytes and we search diligently and cannot find organisms, and if that patient had become suddenly ill, he is to be treated as a patient with epidemic meningitis until proved otherwise, especially since we know that we often are not able to find the organism at the start. The question was whether or not this patient had epidemic meningitis. We felt that he did not because of the count of 40,000 cells in the morning and 1,000 cells in the afternoon. He had meningitis but he did not have epidemic meningitis. We asked him to focus on our finger and follow it and we found that he was completely blind in his temporal right and in his nasal right half of the eye. In other words, the only explanation for this count was an abscess. A marked difference over a short interval of time between the number of cells should always suggest an abscess. These abscesses can be treated in the early stage with sulfanilamide therapy and may be carried to the point where brain surgery can be attempted.

Case 2. This boy, six years of age, awakened out of a deep sleep at four o'clock in the morning and complained of severe headache and vomiting. He refused all food. His temperature rose to 104 degrees, his pulse rate to 130, and his respiratory rate to 24. He had all the neurologic signs of meningitis. He was keenly alive to his surroundings. He had never been ill before. We knew we were dealing with a case of epidemic meningitis. Patients with pyogenic meningitis due to staphylococcus, streptococcus, etc., are nearly moribund at the onset.

Case 3. This was a husky boy, twelve years of age, weighing approximately 140 pounds. He came into the hospital in a somnolent state. He had never been ill before and his parents were healthy. He became ill about fourteen days prior to admission. He told his parents he did not feel well. There was nothing more definite for a few days. He moped about the house. They did not pay much attention to this. He did not have any fever. Then later he complained of being tired and went to bed. Gradually he became listless and lethargic and finally somnolent. He had little or no fever until ten days after his symptoms started. His pulse and respiration were not remarkable until the day of admission. He showed the increase in lymphocytes in the spinal fluid. In other words, it was a typical history of tuberculous meningitis. The family was shocked when they

were told that the boy had tuberculous meningitis. The postmortem examination confirmed the diagnosis. We investigated that boy's family for six months before we finally found the contact in his aunt whom he had occasionally visited.

Case 4. This girl, five years of age, developed, during the course of scarlet fever, a purulent otitis media on the left side. She suddenly became unconscious on the eighth day of illness. She had convulsions of the entire right side of the body. These were temporary and intermittent in character. She remained stuporous and a few hours later the left side began to twitch. The temperature rose to 105 degrees, the pulse to 135, and the respiratory rate from 30 to 40. We might first suspect an extension of the ear infection to the brain, with involvement of the heterolateral side. However, a few moments' serious thinking would prove this to be impossible. Such an extension would be an anatomic curiosity. An abscess would produce a different condition, perhaps a hemiparalysis rather than a twitching. The probabilities were that this child had some other causative factor than her ear. I mentioned previously that children with acute infections should be watched for a week or two. If there is a marked increase in temperature, the urine should be examined, because uremia is ushered in by just such convulsive seizures. It developed that this child had a four plus albumin and a blood urea nitrogen of 57.

Case 5. This little boy, eight years of age, came into the hospital; the diagnosis was epidemic meningitis. He was active and alert and responded well. He had all the signs of meningeal irritation, but in addition he had pathologic signs, Babinski's sign and spasticity. The abdominal reflexes were lost on the left side. We looked at the eyegrounds and found many splotchy hemorrhages in the retina. They were most marked on the right side. The spinal fluid was entirely negative. This boy had an upper motor neuron lesion with meningeal irritation. He had trouble on the left side, so that the probabilities are that he had some irritative phenomenon on the right side of his cortex. Of course, the most common irritation is pachymeningitis in which there is a marked pathologic reflex response on the heterolateral side. A second sign is hemorrhage into the eyegrounds, and a third indication, if one has seen the patient early, is xanthochromic or bloody spinal fluid.

Case 6. This boy, seven years of age, was operated upon for mastoiditis. Ten days later he suddenly began to have a stiff neck, high fever, fast pulse and all the signs of meningitis again. In this situation one should refrain from hasty

inferences. If the appearance and general behavior of the patient is good and if he is mentally alert, one should not do another puncture. One should take another x-ray of his mastoid and find the cell that was missed. A puncture might result in a diffuse meningitis which could not be controlled.

Case 7. This girl, twelve years of age, was admitted with a temperature of 104 degrees, a pulse of 130 degrees and a respiratory rate of 45. She had a positive Kernig's sign, some stiffness of the neck, opisthotonus, cyanosis, dilatation of the alae, air hunger and dyspnea. She had all the signs of pneumonia but they were not consistent. That reminds me of the three exceptions one must always remember. Meningismus is due to first, pneumonia at any age; second, pyelitis in the female; and, third, irritations of the gastro-intestinal tract, whether these are due to typhoid, typhus or paratyphoid infections, etc. All of these conditions present marked pseudo-irritation of the meninges.

Case 8. This girl, eight years of age, had a temperature of 105 degrees, swinging in type. These were the important points: female, high fever, a swinging type of temperature and a changing type of meningeal irritation. We knew at once that this child had a pseudomeningeal irritation. When we examined the urine we found she had pyelitis.

Case 9. This boy, twenty-two years of age, was admitted to the hospital with the diagnosis of epidemic meningitis. He suddenly became ill and disoriented, with a temperature of 103 degrees and a respiratory rate of 25. The Pandy test was positive. The pressure was slightly increased, and there were no organisms. I neglected to mention that when there is a marked increase in cells, these of themselves will give a positive albumin reaction. Thus if there is a marked increase in cells and it is doubtful if albumin is present, the cells can be filtered out and a Pandy test run again on the filtrate. If the Pandy reaction is due to the cells themselves, there will be a marked decrease in the reaction, as we found in this particular instance. Here is a boy who had 800 cells and yet he was not terribly ill despite this fact, and he did not have a marked increase in the Pandy reaction as we would expect. We diagnosed a lymphocytic meningitis and recovered the virus.

Case 10. This boy, eleven years of age, came in as a patient with meningitis. He became suddenly ill with double vision and a facial and platysmal tic. He had all the signs of an upper motor neuron lesion. He had the lymphocytic type of cells, all mononuclear, no organism and no pres-

sure increase, but the Pandy test was four plus. He had an upper motor neuron lesion and with the objective signs mentioned, a typical encephalitis. What are these typical signs? Double vision, a tic, and all of the signs of an upper motor neuron irritation.

DIFFERENTIAL DIAGNOSIS OF JAUNDICE*

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Advances in the differential diagnosis of jaundice are important since an error in the diagnosis may cost the life of a patient. Because an understanding of the mechanism of bile formation is essential in the analysis of each individual case a short review of the subject is in order.

Bile is composed of bile pigments, bile salts and cholesterol, as well as water, inorganic salts, fatty acids, lecithin and fat. The origin of the pigment is the hemoglobin of worn out red blood cells which is broken down by hydrolysis within the reticulo-endothelial cells found in the bone marrow, spleen, liver and lymph nodes, and, according to Bollman and Mann,¹ this is accomplished primarily in the bone marrow rather than in the reticulo-endothelial cells of the liver. This hydrolysis of hemoglobin produces hematin and globin. The hematin is further hydrolyzed to bilirubin which is then excreted by the liver cells. Prior to the passage through the liver there is thought to be a linkage of bilirubin with serum proteins since the reaction of bilirubin in contact with the diazo reagent is different before and after passage through the liver. This difference forms the basis for van den Bergh's reaction which was introduced in 1918. The bilirubin excreted by the liver is concentrated and stored in the gallbladder to be expelled into the intestine, where it is reduced by bacteria to form urobilinogen. The urobilinogen is then changed to urobilin and is partly excreted in the stools and partly absorbed by the portal circulation to be re-excreted in the bile. The normal amount of bilirubin in the serum is .1 to .5 milligram per cent. It has no known function in the bile.

The bile salts are the sodium salts of glycocholic, taurocholic and desoxycholic acids and are considered to be manufactured in the liver cells proper. These bile salts circulate in that they are picked up by the portal circulation and re-excreted by the liver. The bile salts, normally .025 milligram per cent, aid in emulsification of fats and their assimilation, activate pancreatic lipase, keep cholesterol in solution and aid in the absorption of Vitamins D, K and A.

The origin of cholesterol in the blood is thought to be exogenous. The liver acts as a regulator and it is excreted as one of the constituents of the bile. Cholesterol normally averages 200 milligrams per cent in the blood, 50 per cent of which is in the form of esters. It has no known function. The cholesterol is concentrated in the gallbladder twenty to thirty times. In the gallbladder the usual proportion of cholesterol to bile salts is 1:20 to 1:30. If this proportion is 1:13, precipitation occurs. The total amount of bile excreted varies from 350 to 500 cubic centimeters daily.

When we consider the differential diagnosis of jaundice in the purest sense we may eliminate certain conditions in which the skin is colored but not associated with an increased serum bilirubin. Such a condition is carotinemia due to an excess of carotene in the tissues. This condition may be quickly ruled out by history and lipochrome index. Addison's disease may simulate a deep jaundice of long duration but is quickly eliminated by the icterus index, and in a similar fashion hemochromatosis is removed from the discussion. There remain the true cases in which there is an elevated serum bilirubin and it is to these we direct our attention.

There are multiple classifications of jaundice and it is not easy to reduce these to any simple formula. Most of the classifications, however, consider three broad groups, namely jaundice due to excessive destruction of the red cells or hemolytic jaundice; second, jaundice due to the disturbance within the liver parenchyma or hepatogenous jaundice; and third, jaundice due to obstruction to the out-flow of bile after it enters the bile ducts or obstructive jaundice.

The causes of excessive red cell destruction producing hemolytic jaundice are numerous since few cases fall into the familial or primary type. The other causes are icterus neonatorum, malaria, transfusion of improper blood, pernicious anemia, sickle cell anemia, chemical poisons such as sulfonamides, lead, arsenic, phenylhydrazine,† trinitrotoluene, nitrobenzol and cobra venom, streptococcal infections and other severe infections, paroxysmal hemoglobinuria and some spirochetal infections.

Hemolytic icterus may be diagnosed primarily on the basis of history: either the familial type, coming in episodes or crises, or the secondary type, recognized by the presence of some etiologic factor. The symptoms in addition to jaundice are normal colored or dark stools, lack of pain or itching and pale color. Physical examination reveals bradycardia and splenomegaly and in

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†Frequently used in the treatment of polycythemia.

the primary or familial type, blood examination reveals anemia, increased fragility of the red blood cells and spherical microcytes. In both groups there is an indirect van den Bergh test.

The causes of intrahepatic damage producing hepatogenous jaundice include hepatitis of varying severity from catarrhal jaundice to the malignant type of acute yellow atrophy, severe infections, poisoning from arsphenamine, gold thiosulphate, chloroform, phosphorus, carbon tetrachloride, cincophen, cirrhosis of the liver, secondary lues, metastatic carcinoma, abscess of the liver, hyperthyroidism, congestive heart failure, spirochetosis icterohaemorrhagica and absorption of infarcts.

The causes of obstructive jaundice are stones or tumor in the common bile duct, carcinoma of the head of the pancreas, compression of the common duct by tumor, glands or adhesions, stricture of the duct from infection or previous surgery or accidental ligature of the common duct.

A discussion of the laboratory examinations in a case of jaundice will be considered before features of the hepatogenous and obstructive groups are outlined. There has been constant search for a test which would differentiate hepatic from obstructive jaundice but to date this has been disappointing. One reason for this has been illustrated by Mann's experiments¹ which proved that if 20 per cent of the liver remained intact, there were few if any disturbances in the body chemistry. A second point of importance is that in many obstructive cases, especially those of long duration, there is hepatic damage which confuses the picture. A third point is that many of the tests are more a test of liver function than a differential test of jaundice.

It was hoped that the van den Bergh test as previously mentioned would answer the problem, in that bile changed on passage through the liver but its value ended in eliminating hemolytic cases because hepatogenous and obstructive cases both give a direct reaction. A quantitative van den Bergh test or estimation of the serum bilirubin is of value in that repeated tests indicate the constancy or variability of the jaundice which has a bearing on the diagnosis. The icterus index while not so accurate occupies the same place as the quantitative van den Bergh test.

Urobilin normally occurs in both urine and stools. In the totally obstructive case, such as in carcinoma, urobilin never appears in either the stools or urine. In calculus there is a reduction and frequently an intermittent but seldom constant absence of urobilin. In hepatogenous cases there is usually some urobilin present except for a few days during the most acute phase.

Biliary drainage has its value not only in determining the presence or absence of bile but microscopic examination of the material may reveal crystals indicating a calculous obstruction. A flat plate of the gallbladder area may show stones and be of value in the diagnosis.

Cholesterol and cholesterol ester determinations are believed to be of value by Kent.² They are increased in amount and in the normal ratio in obstructive cases and decreased in intrahepatic cases and there is no change in the hemolytic cases. He warns, however, that in long standing obstruction there may be liver damage which may alter the cholesterol findings. He also states that in the recovery stage from intrahepatic jaundice the cholesterol may be even higher than normal. The amount normally present is about 200 milligrams per 100 cubic centimeters.

The cephalin cholesterol flocculation test introduced and studied by Hanger³ is said to indicate an active irritation of the liver cells and was found to be positive in 90 per cent of more than 100 cases of hepatitis, whereas an equal control group of proved obstructive jaundice gave negative or weak reactions in almost every instance. He warns, however, that the test is not infallible. Lippman and Bakst⁴ agree, but state it is no more accurate than any other test of liver status.

Phosphatase determinations are considered of value⁵ in that they are normal in intrahepatic cases and markedly increased in obstructive cases. The normal value is about ten in Bodansky units.

The hippuric acid test is a measure of the ability of the liver to synthesize benzoic acid and amino acid to form hippuric acid. Normally three grams of hippuric acid will appear in the urine in four hours following the ingestion of six grams of benzoic acid. If less than 2.5 grams appear it indicates hepatic jaundice in the presence of normal renal function. This is one of the most popular liver function tests irrespective of jaundice.

The galactose tolerance test depends on the ability of the liver to assimilate this material. No more than 2.5 to 3.0 grams should be found in the urine normally after the ingestion of 40 grams. The test is normal in obstructive cases and more than three grams is lost in the urine in intrahepatic cases.

The glucose tolerance test or modifications of that test have been reported frequently in jaundiced cases. Pachman⁵ in a series of twelve children with catarrhal jaundice concluded that the oral or intravenous dextrose tolerance test is not a satisfactory aid in the differential diagnosis of jaundice. Jacobi⁶ favors this test and feels that a normal test indicates a jaundice of toxic origin;

if the return to normal is delayed the case is obstructive or due to some intrinsic liver disease such as cirrhosis. He further differentiates this non-normal group by treatment with intravenous glucose, insulin and liver extract; if there is a gradual decline of the jaundice the case is one of cirrhosis and if no change occurs it is probably due to calculus or carcinoma and should be a surgical case.

The bromsulfalein liver function test is of little value in the presence of jaundice. X-rays of the gallbladder by dyes are of no value in jaundice cases; little dye may be excreted, leading to false interpretations. The fragility of the red cells to salt solution is mentioned but is only of value in proving the diagnosis of familial hemolytic jaundice. There is no change in other cases. Other tests are done but those indicated are the more commonly used.

In reaching a diagnosis one should follow the accepted plan of an accurate history, complete physical examination and essential laboratory tests with frequent repetition of the latter two. In this way new physical findings, such as a palpable gallbladder, may be noted and a pattern or curve will be seen in the character of the jaundice which may be the deciding factor in the diagnosis.

Hepatogenous jaundice occurs primarily in those under forty years of age but presents its greatest difficulty in those over forty where it may be confused with the obstructive group. Catarrhal jaundice occurs more commonly in males, whereas acute yellow atrophy is predominately found in females. Symptoms of hepatogenous jaundice are nausea, vomiting, slight right upper quadrant pain, usually fever and mild itching. There may be a preceding upper respiratory infection or other etiologic factors present. The spleen is often palpable.

Of the laboratory tests we find the following results: direct van den Bergh reaction; icterus index and serum bilirubin high; intermittent urobilin in stools and urine; duodenal drainage frequently showing presence of bile but no crystals; blood cholesterol usually normal or reduced with cholesterol esters reduced; cephalin cholesterol flocculation test positive in most cases; serum phosphatase usually testing less than ten Bodansky units; hippuric acid test revealing an excretion of less than 2.5 grams; galactose showing greater than three grams eliminated after the ingestion of 40 grams; glucose tolerance test usually normal; and flat plate of the gallbladder negative.

If no satisfactory diagnosis can be made when the patient is first seen there is little or no harm in observation and repeated tests, particularly a check on the level of serum bilirubin and repeated stool

and urine tests for urobilin, because these will frequently clinch a diagnosis which was previously uncertain. The severity or duration is no indication of the cause and should not precipitate an erroneous diagnosis. Operations on patients mistakenly placed in this group are particularly dangerous since the additional trauma and shock of surgery may induce a fatal outcome.

The obstructive jaundice cases are logically divided into two groups based on the etiologic factor, namely those due to carcinoma, usually in the head of the pancreas and those due to a stone in the common duct. Those due to calculus usually present a previous history suggesting biliary dysfunction, that is gaseous indigestion, intolerance to fats, possibly colic and previous jaundice or even known presence of stones. Obese multiparous females predominate in this group. The age of incidence, however, is not helpful since both calculus and tumor occur more commonly in those over forty years of age. Pain has usually been a deciding factor but this is not as reliable as formerly thought. Even though nearly 100 per cent of calculus cases present this symptom, some degree is present in approximately 50 per cent of malignancy cases.³ However, the converse is still a good rule that a painless jaundice in an older patient is usually malignant. The jaundice is usually abrupt with fever in the calculus group and insidious in the malignant case. Loss of weight is more common in the carcinoma group. The spleen is not palpable in either. According to Courvoisier's law those in the calculus group have a small contracted gallbladder, while the malignant cases frequently show an easily palpable gallbladder. The jaundice is higher and constant in the malignant group and variable in the calculus cases. Therefore, frequently repeated tests of the degree of jaundice are indicated.

Considering again the laboratory tests we find the following important points; the van den Bergh reaction is direct in both groups; serum bilirubin and icterus index are only moderately increased in the calculus cases and one of the most important points is their variability over a period of time, as against a gradual constant rise in those due to carcinoma. In a like manner urobilin may appear from time to time in the stools and urine in stone cases and remain consistently absent in the other group, and the presence of crystals in the biliary drainage swings the diagnosis heavily toward calculus. Cholesterol and cholesterol esters are elevated in both groups as is the serum phosphatase. The cephalin cholesterol reaction should be negative in both. The liver function tests with hippuric acid and galactose are normal. The glucose tolerance test commonly shows a diabetic curve in

both groups. A flat plate of the gallbladder may reveal stones in the gallbladder but this should not eliminate the possibility of a carcinoma.

The diagnosis in the obstructive group becomes difficult when long standing obstruction causes some liver damage and alters some of the tests sufficiently to suggest intrahepatic jaundice. Even after some time the diagnosis may not be clear but when the diagnosis is doubtful an exploratory laparotomy should be done at the end of four to six weeks because the majority of intrahepatic cases will begin to show clearing by this time and further delay in obstructed cases only increases the risk. Surgery should be offered to all obstructed patients because Walters⁷ found that 15 to 18 per cent of obstructions due to tumor of the head of the pancreas are inflammatory and relief of obstruction by surgery is permanent.

The accurate diagnosis of a given case of jaundice is highly important because the treatment is entirely medical in the hepatogenous group and surgical interference is not only unnecessary but definitely detrimental. In the obstructive group the fine differentiation into calculus and malignant causes is interesting but not entirely essential since both should have the benefit of exploration. An early diagnosis in jaundice is not necessary because these are not emergency cases and what first appeared to be a logical impression may be changed by subsequent observation and changing laboratory reports. Since none of the laboratory aids is infallible too much emphasis should not be placed on one test or type of test, but an orderly balance of all the information available over a period of time should be used to form the clinical impression of a given case of jaundice. Because treatment is so dependent on the correct diagnosis one can afford to sacrifice speed for accuracy.

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Discussion

Dr. Eugene C. Penn, West Des Moines: Jaundice is pathognomonic of several disorders, not necessarily those of the liver alone, for many diseases of this organ are never accompanied by jaundice. Diagnosis of the cause of jaundice requires above all else a knowledge of how jaundice is produced and depends chiefly on clinical facts, although further additional useful information can be obtained from various tests. If the value and limitation of these tests are appreciated they can serve a useful purpose in defining more clearly the actual conditions.

The urgency and necessity for an accurate diagnosis necessitates the use of every known method at our disposal. Unfortunately many of the tests are not always available and we are compelled to rely on the simpler procedures. The degree of bilirubin retention in the blood from day to day is perhaps the most valuable of tests. Recently, Waugh has made some interesting observations with regard to the changes in leukocyte pictures and blood sedimentation velocities in cases of obstructive jaundice. By observing these changes he has been able to make some interesting differential diagnoses. The work can be done easily in any physician's office and seems worthy of a trial.

Dr. McQuiston is to be complimented for so admirable a presentation on the diagnosis of jaundice, a problem which can cause any of us considerable embarrassment at times.

Dr. A. C. Starry, Sioux City: Dr. McQuiston's discussion of the subject of jaundice was very complete and exceedingly instructive. No organ of the body possesses more varied and distinct functions than the liver and therefore it is one of the largest organs of the body. As the essayist has pointed out, any pathology of this organ may bring on very complex and diverse signs and symptoms which may be difficult to interpret, especially in the differential diagnosis of jaundice. Along with the jaundice other functions of the liver may become involved. Laboratory procedures cannot be properly interpreted unless we list the various functions of the liver and a few of the function tests which may be used in the differential diagnosis. (See below.)

Some of these tests are of definite value while many of them are not sufficiently understood to warrant routine clinical use. Others are being devised in increasing numbers and we hope that correlation of these various tests will some day be fully worked out.

However, the van den Bergh test, the icteric index and the urobilin test may offer definite help. The van den Bergh reaction will aid in differentiating between obstructive jaundice and hemolytic jaundice. In obstructive jaundice the van den Bergh test gives

Functions	Function test
1. Diaminization and the formation of urea.	1. Amino acid tolerance. Blood urea determination. Millions test for tyrosinuria.
2. Uric acid destruction.	2. Blood uric acid determination.
3. Excretion of bilirubin.	3. Serum bilirubin test.
4. Glycogen storage.	4. Galactose tolerance test.
5. Excretion of cholesterol and formation of cholesterol esters.	5. Blood cholesterol and cholesterol esters determination.
6. Detoxification.	6. Hippuric acid test.
7. Selective excretion of foreign dye stuffs.	7. Bromsulfalein.
8. Formation of fibrinogen.	8. Blood fibrinogen determination.
9. Formation of serum protein.	9. Total serum protein; albumin-globulin ratio: Takata-Ara test.
10. Urobilinogen control.	10. Urobilinogen test of urine and feces.
11. Contribution of a factor essential for erythrocyte regeneration.	11. Red cell diameter.

an immediate direct reaction while in hemolytic jaundice the indirect reaction is present. The diphasic tests are difficult to interpret.

As Dr. McQuiston pointed out, these tests are all largely function tests and not strictly differential tests insofar as jaundice is concerned.

SYMPOSIUM ON INJURIES*

WILLIAM R. CUBBINS, M.D.
Chicago, Illinois

In these symposia it is necessary to make a wide study of subjects. I am opposed to the very exclusive specialist and certainly am not in favor of the gynecologist who thinks that he can, with safety, invade the abdominal cavity with no knowledge of intestinal surgery and no knowledge of the repair of blood vessels or ureters. It is unwise for any surgeon to invade the unknown precincts of the abdomen, trusting only to his knowledge of the female organs and knowing nothing of the associated structures with which he is forced to come in contact.

I was astonished not long ago in a great hospital, where it is the custom to use a marked Trendelenburg position, to learn that a gynecologist had tied both ureters. When the Trendelenburg position is assumed, the kidneys sink back into the loin, making tension on the ureters, so that they stand up like cords on either side of the pelvis. Yet, in spite of these perfectly obvious structures, they were included in the ligatures around the uterine arteries. The error was plain the following day, but the gynecologist sought refuge in flight and turned the case over to the urologic surgeon. Gentlemen, this is specialization to the nth power and carries a danger to the patient that cannot be overestimated. Why that gynecologist could not go back into the abdomen, find the ligatures, free them, pick up the vessels and leave the ureters free, is past my understanding.

My knowledge of these structures dates from 1898, when I was sub-assistant to Drs. Franklin H. Martin and Fred A. Besley at the old Post-graduate Hospital in Chicago where they were transplanting ureters into the rectum in order to remove the bladder in patients with a carcinomatous involvement. This operation of Dr. Martin's was later popularized by Robert Coffey, of Portland, Oregon.

About 1904 or 1905 blood vessel surgery was developed by Alexis Carrell, Victor Lespinasse and others. However, those men struggled to suture vessels a millimeter in size and have them

remain patent. The suturing of such minute vessels is unnecessary, but every surgeon operating in the proximity of vessels should certainly possess an accurate knowledge of blood vessel repair. The average gynecologist deprecates the necessity of a knowledge of blood vessel surgery, but the literature is filled with instances in which the external iliac has been injured during a hysterectomy for a tumor that filled the pelvis. One so-called vascular surgeon, who also deals with the sympathetic nervous system, reported a case, demonstrating the patient, in which he had done a sympathectomy for a megalocolon and had overlooked the fact that the anus, which had been primarily imperforate, was only the size of a goose quill and tortuous in shape. To any one not over-anxious to do a sympathectomy, the obvious course was to reconstruct the sphincter ani.

In relation to specialization in trauma, one must have a wide knowledge of neurologic symptoms ready for injuries of the skull, spine or peripheral nerves. He must also be able to meet emergencies in chest and abdominal surgery, at least from a diagnostic standpoint. It is utterly impossible to separate a rupture of the liver, spleen, kidneys or bladder, without an intimate knowledge of abdominal diagnostic procedures.

No one knows the value of specialization in its rôle of the careful study of each individual problem better than I do, nor the value of putting the solution of that problem before the general surgical public. What I deprecate most is the tendency of the average specialist to stick entirely too close to his specialty, without a knowledge of structures that are adjacent to his operative field.

The public is largely responsible for forcing this idea of specialization upon us. They feel that because the carburetor of an engine cannot be handled by the individual who repairs the rear axle, the human organism is relatively the same. However, the living human body cannot be separated and replaced with the same degree of facility as the automobile and a surgeon who tries to specialize in gastro-enterology alone, without a wide knowledge of the general conditions which affect the gastro-enterologic system is treading on dangerous ground. Many of you gentlemen have seen cases where the vermiform appendix was removed because the patient complained of anorexia, nausea and vomiting; yet a careful study would have demonstrated a pulmonary tuberculosis. Instances of this kind can be multiplied ad infinitum. What I am trying to teach is that one must have a wide general knowledge in addition to his definite and specific knowledge of the line in which he specializes.

They call me an orthopedic surgeon. I resent

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that. I like to think that I am a general surgeon. I am intensely interested in trauma, and trauma, as each one of you general and specialty men know, has absolutely no idea of selectivity. It will injure the great toe and the scapula, the eye and the genitalia, the back and both bones of the leg with utter abandon, and, personally, I want an individual with a wide view of the human anatomy when I am in need of care.

We will now introduce Dr. Dwight C. Wirtz, of Des Moines, who will talk on the treatment of compound fractures.

COMPOUND FRACTURES AND COMPLICATIONS*

DWIGHT C. WIRTZ, M.D., Des Moines

All compound fractures should be considered emergencies and immediate examination done to determine nerve injury, blood vessel damage, muscle and tendon trauma as well as the bony injury. A great many compound fractures are the result of severe accidents and some of the patients are in a state of shock. War injuries which we all hear so much about at the present time come under this category. What is said of compound fractures holds true in war injuries.

If the patient is in shock he should have his pain controlled with morphine, blood plasma, normal saline or glucose depending upon which is on hand and which the patient needs most. Blood plasma is a very excellent agent in controlling shock. Of course, it is taken for granted that shock blocks under the foot of the bed are to be used and plenty of external heat applied to keep the patient warm. If immediate care of the fracture cannot be done because of shock a temporary splint should be applied to alleviate pain.

Wounds treated within six hours rarely become infected and a large percentage of compound fractures can be cared for within this period of time. When the fracture is unreduced and the wound neglected for ten to twelve hours bacterial growth has taken place to such an extent that infection occurs in a large percentage of patients. Manipulation of the fracture and probing around in the wound after this period of time spread the infection further by breaking down the wall of protection which has been laid down by the white corpuscles. By waiting more than six hours, the golden opportunity to have a compound fracture heal without an infection has been lost.

In considering infections the gas and tetanus bacillus must not be forgotten and all compound fractures should receive a prophylactic dose to pre-

vent this condition from arising. It is worth while to mention that gas infection can take place even after a prophylactic dose of antitoxin has been given and in severe and large lacerations it is wise to give also a treatment dose at the time of injury. Care of the wound itself consists of adequate débridement without suture. Small lacerations or openings in the skin need only a sterile dressing. Severe lacerations may have nonabsorbable sutures placed in position for tying six or seven days later when the possibility of infection has passed.

In the more extensive injuries the sulfonamide drugs have won their place as proved by the Spanish Civil War records and the Pearl Harbor reports. The granules of the sulfonamide chosen by the doctor are better than the powder since they do not cake in the wound but slowly dissolve and thus have a better action against the bacteria present. The drug by mouth, grains 15, every four hours for three to seven days is used along with its implantation in the wound.

Vaseline packs after the method of Orr in a great many cases should be inserted into and over the extensive soft tissue wounds and the cast applied over such dressings to immobilize the



Fig. 1. Photograph shows severe traumatic muscle laceration with comminuted fracture of both the ulna and the radius the result of a mule bite. The mule died of rabies.

fracture. If the patient's temperature does not rise too high or if other symptoms do not appear it is not necessary to look at the wound or change the cast for four to six weeks. Some odor may come from the cast but that is of no serious consequence. There may be an occasional case where other types of immobilization are indicated but most of the injuries can be handled as described, immobilized with plaster and left alone. Frequently pins may have to be inserted through the bone above and below the site of the fracture and these pins incorporated in the plaster to maintain reduction, but since these pins are away from the damaged area they cause no trouble and the possibility of infection occurring around the pins is very slight.

Complications of compound fractures occasion-

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ally take place. Nonunion or delayed union is always possible and for those bone grafts should be done. Tetanus, if the antitoxin is given, practically never occurs. Gas infection can and has occurred even when the prophylactic antitoxin has been given and it is well to remember that a treatment dose should be given in the severe traumatic lacerations along with the prophylactic dose. Osteomyelitis occurs in a certain percentage of compound fractures and should be treated as the condition indicates; that is, the Orr drainage and sequestrectomy when indicated. A case of a compound comminuted fracture from a mule bite, the mule dying of rabies, will be reported.

On March 10, 1942, a farmer was bitten by a mule, receiving a compound comminuted fracture of both bones of the left forearm with the loss of a large piece of skin over the dorsum of the arm and a very severe laceration of all the extensor tendons of the forearm. This man lived in a small town outside of Des Moines and was sent to Des Moines for care. He received his first care ten hours after the injury which is longer than it should be. He was taken to the operating

and another pin through the upper end of the ulna, so that firm immobilization could be maintained by fixing these pins in the plaster. A solid cast was applied over the arm. A window was cut in the cast over the injury but the window was not removed. The day following the injury, the mule died and the head was sent to Iowa City where rabies in the mule was diagnosed. The Negri bodies were found in the brain. Four mice were injected with the brain tissue and all of the mice died of rabies. Brain sections from the mice also showed Negri bodies.

Seventy-three hours after the injury rabies vaccine was started on the man and he received fourteen daily doses. He suffered no ill effects from the vaccine and as far as I can tell had no reactions from it. Seven days after the surgery the patient began to develop a very putrid odor. The window in the cast was opened and the extensor muscles were beginning to slough from the lack of blood supply. A portion of the slough was removed and the window replaced. When clean granulation tissue develops over this area it will be skin grafted and tendon transplantation later will be done to obtain extension of the fingers for the loss of the extensor muscles.



Fig. 2. Abdominal skin graft procedure under process about four months following the injury after the slough had cleared up.

room. The arm was cleaned with soap and water and the skin shaved. The extensive laceration was irrigated with two quarts of saline and the arm was then painted with merthiolate and sterile drapes were applied. Débridement was done and the fractured radius fixed with one vitallium screw; the ulna was so badly comminuted that very little attempt was made to reduce the pieces except to line them up in a general way.

The lacerated extensor muscles were sutured together en masse in the hope that they still had sufficient blood supply to recover. The radial and ulnar artery had not been damaged. The nerve supply of the hand was normal except for the radial nerve distribution to the dorsum of the hand and fingers. Sulfanilamide granules were sprinkled into the wound and sterile dressings applied over the wound which was left open. A pin was placed through the lower end of the radius

Chairman Cubbins: We will have time for a few questions. Does some one wish to ask a question in relation to this excellent demonstration? If not, it is the desire of the chairman to state that the result in the compound injury of the elbow joint and the forearm, which has been demonstrated, is remarkable and shows that Dr. Wirtz is alive to the danger of gas bacillus infection. Whether we call this organism the bacillus of Welch, the bacillus of malignant edema, or the clostridium of Welch matters little. When there is an infection with this type of organism the action is extremely rapid. The general symptoms are a rapid rise in temperature, a very rapid pulse, and a semi-anesthetic condition around the wound. The patient is also in a condition of exhilaration. However, the vital diagnostic factor consists in the rapidity with which the gas spreads into the tissues adjacent to the wound. It is common to observe this gas spread proximal to the wound at the rate of one inch an hour. Two inches in an hour is not uncommon and greater distances have been recorded. This spread can be definitely located by the palpating fingers and when an infection with the above characteristics is present the only things that can save the limb and probably the life of the patient are first, the administration of heroic doses of gas antitoxin, 40,000 units in the first dose and 20,000 units repeated every four hours; and second, the incision and uncover-

ing of areas through which the gas is spreading. In other words, we have not found it dangerous to make an incision in advance of this spreading infection, but we have found it, many times, to be extremely dangerous when incisions have not been made in advance of the infection. These wounds are laid wide open, treated with a solution of permanganate of potash and peroxide of hydrogen, proportions one to four.

In relation to the diagnosis by culture, litmus milk will probably show a positive culture sooner than any other medium, but at least eighteen, and sometimes thirty-six hours, will be required before the diagnosis can be positive. On the other hand, if the surgeon waits eighteen hours with the type of infection described above and by Dr. Wirtz, depending upon the x-ray or some other useless method to check its advance, loss of the limb or death is an almost certain outcome. We have never observed that x-ray treatment had the least value in a fulminating case, such as has been described. Dr. Wirtz is to be congratulated upon his saying of this hand and forearm. It is a beautiful piece of work. The next paper will be on nerve injuries by Dr. Edward H. Files, of Cedar Rapids, Iowa.

NERVE INJURIES*

EDWARD H. FILES, M.D.,
Cedar Rapids

In the following discussion of peripheral nerve injuries it is my wish to review with you briefly first, the essential histology, and the part it plays in the aftermath of nerve trauma; second, the clinical highlights as they bear on examination of the patient, particularly in nerve injuries of the upper extremity; and third, comments on what you and I, who are not expert neural surgeons, but who are the ones who see these injuries first, may properly undertake in the way of surgical treatment.

The nerve, as it courses along the extremity, has an outer connective tissue coat, the epineurium, analogous to the outer sheath of a telephone cable, acting as a protecting cover and conduit for the bundles of wires within. These bundles of nerve fibers, called funiculi, are separated from one another by connective tissue, the perineurium. Just as such an inner bundle of telephone wires may contain many separate wires all from the same city block, so the funiculi contain many fibers, but all from the same local area, and of the same type of afferent, or efferent, function.

Within the funiculi, the individual nerve fibers also are separated by connective tissue, the endo-

neurium. It is these separate nerve fibers we wish to consider. They may be myelinated or non-myelinated, but the nerves with which we are concerned are of the myelinated type.

This individual nerve element consists of an axis-cylinder, composed of neurofibrillae, and appears as a delicate continuous thread, which is the actual conducting mechanism. Around the axis-cylinder lies the myelin sheath, of lipoid material, with interruptions at intervals, called nodes of Ranvier. Outside the myelin sheath is a delicate tough membrane, the nucleated sheath of Schwann. This nucleated sheath is essential in the process of nerve regeneration following injury. The nuclei of this membrane, for a short distance (about one millimeter), proximally, and through the entire distal segment from the plane of section, very early after the trauma occurs, begin to show hyperactivity and mitosis, much as in embryonic tissue. By the sixth day, according to Lewis, these neurilemmal sheaths have begun definitely to form the so-called protoplasmic bands. These bands, no longer tubular, are merely streamers of viable tissue, extending for one or two millimeters above the plane of section, and through the entire distal segment. They serve as a scaffolding, down which the axis-cylinder with its myelin coat will later make its way.

At the same time, degeneration of the axis-cylinder and myelin sheath occurs in the same location, namely the distal few millimeters of the proximal segment and throughout the entire distal segment. This is the so-called wallerian degeneration, which in effect clears away the useless impulse-conducting apparatus of the distal segment of the injured nerve fiber, while leaving a viable tissue scaffold within the fasiculus.

The actual gap between the severed nerve ends must be bridged in some manner. In the absence of suture, the defect will be occupied by scar tissue with the bulbous ends of the nerve incorporated in it. The thickened ends are due to the proliferating cells of Schwann referred to above, the proximal end also containing viable nerve endings, consequently called neuritic neuroma, the distal one containing no viable axis-cylinders, hence called aneuritic neuroma. The regenerating axis-cylinders from the proximal segment are impeded by scar tissue and by failure of junction of the protoplasmic bands, and are aided by the converse condition. The entire aim of suturing is of course to reduce scar tissue to a minimum, and to restore as nearly as possible the normal scaffold arrangement of the funiculi at the plane section.

This brings us to consideration of the internal topography of the nerve and the effect of rotation

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of the sutured ends on restoration of function. It is clear, that if for example the distal segment were rotated a quarter or half turn on the proximal segment, the resulting scaffold would lead each advancing funiculus or group of nerve fibers down an entirely new channel. In the analogous situation in a telephone cable, one would perhaps dial the post office, and instead, reach the county jail. Moreover, in mixed nerves, some funiculi carry motor, while others conduct sensory fibers, and like east and west, "never the twain shall meet". In suturing, therefore, we must think in two planes; the end to end restoration, and the re-establishment, as nearly as may be, of the internal nerve pattern. With optimum conditions of apposition of the severed nerve ends, with minimal disturbance of the scaffold of the internal nerve pattern, the myelinated axis-cylinders of the proximal segment will enter and grow down their proper distal channels at the rate of about two millimeters per day. The interval between suture and final neurotization of the motor end plates varies widely, depending on the nerve and the level of injury, from five to fourteen months. The myelin sheath lags behind the axis-cylinder somewhat, so that the very end of the growing axis is nonmedullated, and gives rise to Tinel's sign. This is a sensation of tingling or electric shock on pressure or tapping over these bare nerve endings, and is useful in detecting the presence of regenerative progress.

With this review of the structure of the nerve, and the processes of degeneration and regeneration which follow trauma, let us next consider what effects to look for in the patient with an extremity injury. These divide naturally into early and late findings, depending on when our first examination is made. If immediate, as a first aid measure we are concerned with paralysis and sensory disturbance; if the injury is a week old or older, we must add the atrophies, contractures and the occasional causalgia.

The examination at the time of the accident is of paramount importance, since early recognition and treatment can eliminate much trouble later. A few simple rules may be listed as follows:

1. Bone, nerve, vascular and muscle injury can all occur and exist, with or without any associated wound or break in the skin. All must be considered.

2. If a wound exists, leave its examination and exploration until the last thing. The original dressings should be left undisturbed, if possible, while the extremity is examined and the surrounding area cleansed.

3. When the wound is uncovered, be ready to convert it from a dirty to a clean wound by meticu-

lous, gentle cleansing under aseptic technic and suitable anesthesia. If not more than two or three hours have elapsed since the injury occurred, and if there has been no intervening surgical interference, do just as thorough a job of repair as the patient's condition will permit, and close the wound completely, using a primary skin graft if necessary.

4. Splint soft tissue injuries as you would fractures or sprains.

If the above general plan is followed, the examination of the extremity will disclose signs of nerve injury in the absence of any wound, or before a wound is uncovered. These early signs of nerve trauma will be, as mentioned before, manifested by some motor or sensory disturbance. A very few extremely simple tests of the arm and hand, all of which can be done in two or three minutes, if the patient is conscious and can cooperate, will definitely reassure us of the intact function of the musculocutaneous, musculospiral, median and ulnar nerves. Those of you who have heard Dr. Loyal Davis discuss this subject will recall how vividly and concisely he presents it. Repetition will do no harm. Tests of motor function are:

1. If the patient can raise his upper arm forward and flex his forearm normally, the musculocutaneous motor component is intact.

2. If he can extend his forearm against resistance, dorsally extend his wrist and fingers, abduct his thumb and supinate his forearm in a normal manner, the musculospiral motor component is intact.

3. If the patient can oppose his thumb to his little finger, if he can completely flex his thumb and index finger, and if he can pronate his forearm normally, the median motor component is intact.

4. If he can abduct and adduct his fingers when partially flexed, if he can flex the proximal phalanges with the distal phalanges extended, particularly the ring and little fingers, the ulnar motor component is intact.

Under tests of sensory function may I say that the pin prick test is only reliable if small, local areas of isolated nerve distribution are used for the test. The reasons for this fact lie in consideration of the phenomena of protopathic and epidermic sensation, described by Head in 1905, and discussed later in this paper. Tests of sensory function are:

1. If the patient has normal sensation over the radial margin of the forearm, the musculocutaneous sensory component is intact.

2. If he has normal sensation over the dorsal surface of the web between the thumb and index

finger and the dorsal surface of the forearm, the musculospiral sensory component is intact.

3. If he has normal sensation over the tactile surface of the index finger, the median sensory component is intact.

4. If the patient has normal sensation over the dorsal surface of the distal phalanx of the little finger, the ulnar sensory component is intact.

All of the tests enumerated above, both of active muscular movements by the patient, and his response to pin pricks, can be done in less time than I have taken to describe them. Forearmed by the information thus obtained, and correlating any abnormal findings with the anatomic location of a wound, if present, we are ready, as far as the question of nerve injury is concerned, to cleanse and explore the wound itself. If there is no wound, however, associated with our abnormal neurologic findings, we cannot be sure whether there has been an anatomic tear or rupture of the nerve, or whether we are dealing with a so-called "physiologic block" from contusion or compression of the nerve. In such a situation, watchful waiting is justifiable within certain time limits, up to six or eight weeks, providing the patient is carefully followed and frequently tested for evidence, either of returning function, or on the other hand, of muscle degeneration. The reaction of degeneration in muscle, as shown by electric tests, is an indication for exploratory operation, according to Deery.

When we see the patient with a nerve injury, for the first time, a week or more after the date of accident, the situation is quite different, and additional changes in the extremity will be present. They will become more noticeable, and less amenable to treatment, the longer the interval of delay. These changes are:

1. The formation of scar and neuromata at the site of the nerve severance.

2. Degeneration of the involved muscle tissue with resultant stretching or contraction, atrophy and fibrosis.

3. Contracture deformities because of unopposed action of the antagonist muscle groups. Classical examples are the "clawhand" in ulnar nerve paralysis, and the so-called "monkey paw" in the combined median and ulnar lesions. In the latter, the appearance is due to the atrophy of the thenar and hypothenar eminences, the abducted thumb on a level with the palm, and the deformity of the fingers, with hypertension of the proximal phalanges, and flexion of the middle and distal phalanges.

We are all familiar with the drop wrist, pronation of the forearm, and characteristic position of the fingers and thumb in paralysis of the musculo-

spiral nerve. This is one of the most disabling palsies, but fortunately has a good prognosis with a relatively high percentage of recoveries. In this connection, Lewis suggests that "those nerves in which the sensory are in excess of the motor fibers, evidently give the worst prognosis after suture."

I have earlier referred to the terms protopathic and epicritic sensation, and the unreliability of pin prick sensation except in the areas of isolated nerve supply. Protopathic sensation, by definition, includes cutaneous pain of all kinds, recognition of temperature below 20 degrees and above 45 degrees, centigrade, and mechanical stimuli to hairs. Epicritic sensation, by definition, includes recognition of light touch, as cotton wool, recognition of temperatures between 20 and 45 degrees, centigrade, localization of cutaneous impressions and discrimination of two points.

These two systems of sensory function are quite independent of one another. Protopathic sensation is variable, and as a rule returns first after suture. Epicritic sensation is constant, and usually returns last or not at all after suture. Consequently, if we desire to make a complete examination of the sensory function of a nerve, we must test for both protopathic and epicritic loss, and these will rarely be found to coincide, the epicritic area usually extending well beyond the protopathic zone. Inasmuch as loss of epicritic sensation is definitely disabling, it must be given due consideration in any medicolegal examination involving permanent disability. Likewise, the various vaso-motor and trophic disturbances may prolong disability associated with nerve division, long after the return of muscle function.

Finally we come to the question which confronts you and me, the doctor in the average American community who is expected to see first, and treat, the injuries of civil and industrial life. What should we do for the patient with a wound and evidence of a severed nerve? May I repeat the general rules for the first handling of any injury:

Think in terms of bone and ligament, nerve, blood vessel and muscle, with or without a wound, before doing anything. If a wound is present, ignore it until the rest of the extremity has been examined and cleansed.

Mask the mouth and nose of everyone in the room. Using only mild soap and water on cotton balls, with anesthesia if necessary, convert the dirty wound to a clean wound. Flush out the soap with normal sterile saline, using no antiseptic in the wound.

Be gentle.

Do the most thorough repair possible, and with reservations noted earlier, close the wound completely.

Splint the repaired, closed wound as you would a fracture.

If sulfanilamide or sulfathiazole powder is introduced in the repaired wound before skin closure, it should be done as an extra precaution, rather than a short-cut in place of the time and effort of meticulous cleansing of the soiled tissue surfaces.

In considering the surgical treatment of the injured nerve itself, I can do no better than to summarize for you the pertinent comments in an article by Dr. Edwin M. Deery, neurologic surgeon of New York, which appeared in the April, 1941, number of the *Surgical Clinics of North America*. He suggests first, that "while complicated or late cases of nerve injury had best be left to the specialist in neurologic surgery, emergency surgery and early primary suture can, and should be done by all surgeons, and as promptly as indicated." In the emergency surgery he of course advocates complete primary suture if time and the patient's condition permit; if not, the least that should be done is the rough approximation of the cut nerve ends by a single black silk suture. The obvious reasons for this are that a non-absorbable suture will prevent retraction of the ends, and the black color will serve as a guide to the lesion, in the later complete repair.

Dr. Deery mentions the occasional mistake of suturing one end of a nerve to one end of a tendon. Noting the distinct difference in appearance, both in longitudinal view and cross section, he blames such an error on poor visibility, for lack of hemostasis, and on trying to work too fast. Dr. Deery believes primary suture should always be carried out, even in a much soiled wound, since some benefit will almost surely be had, even if infection supervenes, in decreasing the technical difficulties when re-operation becomes possible. He also stresses splinting, after surgical repair, and deals briefly with postoperative physiotherapy measures, including massage, motion, heat and electrical stimulation.

In the same article Dr. Deery discusses rather briefly some points in the technic of both primary and secondary nerve suture, but I am purposely omitting the description of the technical detail of suture, the better to focus this discussion on what to look for, what to expect and what to do, rather than how to do it.

As we meet here and leisurely discuss the management of injuries, I cannot help contrasting our situation with that of the doctors in war combat zones, and in the cities subjected to bombings. Many more of us may be in like circumstances before the next annual state meeting. Then, in-

deed, we shall encounter emergencies spelled in capital letters without the help of experienced consultation, without reference books, perhaps with inadequate equipment and scanty supplies. If that is our destiny, it is my hope and prayer that we may have the professional judgment and capacity, and the physical strength and stamina, for the job ahead.

Chairman Cubbins: One thing about this paper which each and every individual should take to heart is that without an accurate knowledge of anatomy, both visual and tactile, without an actual knowledge of physiology, the individual trying to do surgery of any kind is lost. You must have the three-legged stool, anatomy, physiology and pathology always available. As I stated before, trauma is utterly and absolutely unselective, and those of you who are going across or are going to meet the emergencies that probably or possibly may come here, are going to find that without a careful review of your anatomic findings and of your physiologic findings you will be absolutely lost. The next paper is by Dr. Albert I. Haugen, of Ames, Iowa, on head injuries.

HEAD INJURIES*

ALBERT I. HAUGEN, M.D., Ames

While automobile accidents constitute only one of the sources of head injuries, they account largely for the progressively increasing incidence of head injuries that we have had in the past two decades. A report of a series of autopsies on automobile victims showed that in about 45 per cent of the cases the primary cause of death was the head injury. At that rate we should have about 250 head injury deaths from automobile accidents alone in this state each year.

While there have been various classifications of brain injuries, some based upon the pathology found, such as the old terms of concussion, contusion and so on, and others based upon the degree of severity of the injury apparent at the time of admission, the final diagnosis in each case must be a word picture describing the damage found in each of the various structures involved, after complete investigation with all available clinical methods, including sometimes surgical exploration. Likewise the treatment in each case must vary according to the physician's interpretations of the symptoms and signs as they arise. In other words, we must have complete individualization both in diagnosis and in treatment.

The hazards to the patient and the problems which confront the doctor in charge of the man-

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agement of a case of head injury might be put into the following categories: shock, infection, excessive intracranial pressure and finally the various forms of intracranial hemorrhage which are subject to surgical treatment.

In rendering first aid to one who has met with a head injury, the first thing to be done after freeing him from the wreckage, is to place him comfortably in a horizontal position where we can make a hasty survey of the damage done, noting particularly the patient's mental status. Has he been unconscious? Is he unconscious? Is he stuporous or confused, or is he in a deep coma? Particular attention should be paid to the presence of associated injuries. Excessive bleeding must be stopped, preferably by compression, and all of the wounds should be covered by the cleanest available material. Then the patient should be moved indoors, away from the excessive cold or the excessive heat of the outdoors. He should be taken to the hospital if it is not too far away; otherwise transportation should be delayed until the patient recovers from the shock.

The stuporous or comatose patient should be put in bed, on his side or on his face, with the foot of the bed slightly elevated in order to prevent aspiration of mucus and vomitus into the respiratory tract. All except the mildest injuries need treatment for shock. External heat should be applied in the form of a heat cradle, hot pads and hot blankets, always with due regard to the danger of burning the comatose patient. No attempt ought to be made even to undress or to clean one who is in profound shock. Open wounds are merely covered with sterile dressings, perhaps after applying some sulfonamide drug into the wound. X-ray examination, spinal puncture, complete neurologic examination—all should be postponed until the shock is overcome.

As in all other injuries, our main effort in the treatment of shock is to overcome the vascular collapse and the lowered blood volume, but in head injuries we have a considerably different problem, because of the impending edema or swelling which is certain to occur following any contusion or laceration of the brain. This takes place within the unexpansible cranium, and we must put something into the vascular tree that will stay there. The trouble with the crystalloid solutions which we ordinarily use (salt or sugar solutions) is that they increase the blood volume momentarily, but they escape into the surrounding tissue and add to the danger of increased intracranial pressure. Perhaps the best medium we can use is blood plasma and that in a concentrated form. If we use plasma and dissolve it in only enough water to make a hypertonic solution, the

plasma protein has an osmotic effect and stays put. It has other advantages. It can be used without typing or cross-matching. Furthermore, it does not add to the increased viscosity or hemococentration, and we must do everything to promote a good blood flow through this swollen brain.

This adding of fluid to the blood stream must be done often enough to maintain a diastolic pressure of at least 60. Ephedrine added as a vasoconstrictive tonic may help to maintain it. Quiet surroundings are important, of course. The question of sedatives in these head injuries is a ticklish proposition also. In the first place, morphine, which we ordinarily use to control pain and restlessness in injuries, is too much of a respiratory depressant, and secondly, the state of the patient's consciousness is our most important guide in following the progress of the case and we must not mask that by using morphine. It is best to use some mild barbiturate or perhaps paraldehyde or avoid it altogether. Mechanical restraints, too, are contraindicated because they tend to increase the fighting rather than to control it. Well padded side boards on the bed are helpful. Good nursing care, of course, is important. In a patient who is comatose for several days, the care of the skin, bladder, bowels, food and fluid intake becomes quite a problem, and we need frequent, quarter-hour and half-hour recordings of the patient's pulse, temperature and blood pressure, as well as a careful observation of the patient's state of consciousness. In other words, the doctor should pay more attention to his patient than to the charts and laboratory findings.

Infection is no longer a frequent cause of death in head injuries. Those liable to infection are the open wounds, compound fractures, gunshot wounds, other foreign body wounds, and those communicating with the paranasal sinuses or the mastoid. Those in the last group manifest themselves by the draining of the spinal fluid from the ears or from the nose. These patients should be isolated in order to reduce to a minimum the danger of exposure to respiratory infections. All intra-aural and intranasal therapy is omitted. Spinal puncture is avoided for fear of reversing the current and causing infection in the subarachnoid space from the nasal passages. The ear is simply covered with sterile dressings, and the patient, if conscious, should be told to avoid coughing, straining and sneezing.

Tetanus and gas gangrene prophylaxis should be administered and sulfonamide drugs should be started early. The proper surgical treatment of these open wounds is a very important feature. It is a formidable procedure and must be done right in order to be effective. It should not be done at

the office or in the home. It should be a hospital procedure. The time to do this is after complete recovery from shock. It has been brought out in a previous paper that compound injuries should be treated and closed early. I believe with our present chemotherapy there is no great rush to do this. These patients should be allowed to recover from their shock. Dr. Munro of Boston usually leaves this treatment until the second twenty-four hours. The patient is anesthetized. If he is conscious and cooperative, local anesthesia can be used, if not, perhaps the best anesthetic will be pentothal sodium, intravenously. The scalp is shaved, and a complete mechanical cleansing is done, rather than depending upon antiseptics. The scalp is scrubbed with soap and water and a brush, just as a surgeon prepares his hands for operations. The open wound is irrigated with normal salt solution, after which some general, mild antiseptic may or may not be used.

The wound is now ready for débridement. That term, too, is variously interpreted. Some are satisfied merely to remove any little tags that are hanging by mere shreds. The term under those conditions should be excision of the wound, in other words, excision of the traumatized edges of both scalp and pericranium. However, it is easy to miss a fracture line at the bottom of this wound. A penetrating foreign body wound may even be present, and these should be felt for with the tip of the finger. A simple fracture, without any depression or without any comminution, does not need special treatment. One can simply apply some sulfonamide crystals in the wound and close it with two rows of silk sutures, undermining the flaps as necessary in order to allow closure without undue tension.

A simple, depressed fracture, over any motor area of the brain or visual center or speech center, should be elevated as soon as shock is over. Those over the silent areas need no special treatment unless they are fragmented or unless they have lacerated the dura into the underlying brain. I believe that subsequent epileptic manifestations are due to scar tissue within the brain as a result of former contusion rather than to the presence of any depressed bone that is pressing upon that area. Over the frontal area of the forehead it may be necessary to raise the depression for cosmetic reasons.

In compound injuries the findings will differ with a number of factors. In these so-called penetrating wounds, the factors are the size, nature and speed of the missile which strikes the head and whether or not the head is in motion at the time of impact. Those are the most important factors. High-speed missiles of small size pen-

trate the outer table, leaving a circumscribed hole, perhaps without any radiating linear fractures, but they carry with them fragments of the inner table which lacerate the dura and tear the cortical vessels and brain substance to a much greater extent than one would be led to believe from the appearance of the wound of entrance. The surprising thing is that many of these patients show no unconsciousness and relatively little shock. These injuries can be operated upon and closed at once.

On the other hand, in accidents which occur when the head is in motion, for instance when one is riding in a fast-moving car or when the body falls through distance and strikes a firm object, even if there is no penetrating missile, there is much more shock, a greater degree of unconsciousness and more gross damage to other parts of the brain than those immediately underlying the point of impact.

Will Mayo once said, in discussing the advances in chest surgery as a result of World War I, "A great many chests were opened very suddenly." The same thing can be said of head injuries in World War I. A great many heads were opened very suddenly. That gave Dr. Cushing his opportunity to develop the wound excision method of treatment whereby he reduced the mortality rate of these injuries from 60 per cent to less than 30 per cent.

The preparation of the scalp and the wound is the same as I described for treatment of scalp wounds. A clean incision is made around the contused area, down to the skull. Several burr openings are made in the skull around this contused area. These openings are connected by bone-cutting forceps and the damaged plate of bone is lifted out en masse from the underlying dura. If that underlying dura is intact, nothing more should be done unless there are signs of subdural hemorrhage with the discoloration so characteristic of that condition. If the dura is lacerated the edges should be trimmed off, and the liquefied or contused portion of the brain and clots are removed through a rubber catheter with suction. Modern neurosurgeons are even bolder than that. They do not hesitate to débride large areas, especially of the silent brain. With electrosurgical methods they are doing complete wound excision even of the damaged part of the brain, and with the more powerful suction apparatus which we have now they really do a thorough job.

The wound is then closed. The dura may need to be patched with a strip of periosteum, and radiating incisions are made in the scalp from this original incision, so that the flaps can be undermined and sewed together without any undue ten-

sion, after the wound is filled with a sulfonamide drug.

Once the patient has overcome shock and been treated for the open wound, we come to the next and perhaps the most important hazard for the patient, that of excessive intracranial pressure. At this stage we can safely do a spinal puncture on the patient. We determine the degree of pressure and whether or not blood is present in the spinal fluid; this is also the time for x-ray examination, if it is indicated, and a complete neurologic examination, because from this stage on the patient must be watched carefully for signs of impending loss of compensation in the mechanism regulating the intracranial pressure. What are the indicators of increased intracranial pressure? We can measure the pressure directly by the manometer applied under spinal puncture, but perhaps an even better indication is the patient's symptoms. The clinical symptoms which follow increased intracranial pressure are headache, nausea and vomiting, restlessness, increasing stupor, increasing blood pressure with a concomitant rise in the pulse pressure and a slowing of the pulse rate. They are the findings up to the breaking point of compensation. Temple Fay considers this relationship between the pulse and the pulse pressure a very good indicator. In other words, when the pulse and the pulse pressure tend to approach each other, the situation is becoming dangerous and calls for further relief of the pressure.

The pathogenesis of this increased intracranial pressure is the interference with the arterial blood supply to the brain cells and the brain centers, resulting in anoxemia of those vital structures. Our effort must be to maintain or to guard against losing this compensation not only to preserve the life of the patient at the immediate time but also to preserve the functions themselves for the patient's later use.

What are the methods or means of controlling intracranial pressure? The fluid intake should be limited to 600 to 1,000 cubic centimeters each day. The amount will vary with the character of the patient. An alcoholic patient may come in completely hydrated. He is saturated. That man can stand a markedly restricted intake and he can stand a lot of dehydration. On the other hand, a small, skinny, emaciated person will tolerate more fluid and less dehydration. Conscious patients, of course, can take this fluid by mouth. Unconscious patients will have to receive it intravenously or through stomach tubes. Another method of controlling intracranial pressure is by the use of hypertonic glucose solutions. These are very commonly used during the stage of the

shock also, but the plasma has the advantage in that more fluid may be applied with the plasma. The hypertonic sugar solutions carry with them only a small amount of fluid and some fluid is necessary to raise the blood volume, but these intravenous hypertonic solutions can be repeated every four or six hours as necessary. Magnesium sulfate, by mouth or by rectum, is a very efficient means of dehydrating a patient, and very good results are obtained by a combination of the two, the hypertonic sugar solutions being given intravenously, followed a short time later by magnesium sulfate by mouth or even by enemas.

Spinal drainage is a moot point; everyone does not agree on how frequently and how thoroughly the spinal fluid should be drained. Some fear the danger of using the spinal puncture in severe head injuries. Dr. Munro, of Boston, however, says he has never seen any danger from spinal puncture, providing it is not done during the stage of shock. If the spinal fluid is bloody, most men agree that it should be drained once or twice a day, with as much fluid being removed as will come with the patient in a horizontal position. It should be done slowly through a small caliber needle, and at least enough removed to reduce the pressure by one-half of what it is over and above normal.

If these dehydration methods are pushed rather vigorously for forty-eight hours, we encounter another hazard, that of excessive dehydration of the patient. This must be guarded against. The indications are failure to obtain as much spinal fluid, or at least a markedly decreased spinal fluid pressure, a decreased urinary output of the patient, dry skin and dry tongue. It is almost impossible to check accurately a patient's output. We can check carefully his intake of fluids, but when the patient vomits and perspires freely we cannot measure the output.

Finally, one of the chief responsibilities of the physician in charge of the management of head injuries is the recognition of those cases of intracranial hemorrhage which require surgical treatment, namely, the epidural or extradural hemorrhage and the subdural hemorrhage. In all the reports of postmortem findings on head injuries we find a number of cases where these conditions have been overlooked. Patients who are admitted in deep coma, or almost pulseless, and those whose coma persists, fail to show any response to the treatment for shock, and experience has also shown that they do not tolerate surgical decompression. If they fail to show any improvement in their mental status, I think it is a fair thing to explore, through burr holes, for extradural or subdural

hemorrhage. Unless they have too severe an injury of the underlying brain, some of them may be saved in this manner.

Extradural hemorrhage occurs in about two to five per cent of all head injuries. Some of them will manifest the typical textbook pictures of primary unconsciousness, lasting for a few hours or less, and then a return to consciousness, which is not always complete. It is a relative matter and this lucid interval often lasts a few hours only to be followed by a gradually increasing coma. However, the majority of them are associated with enough brain contusion or subdural bleeding or cerebral edema, that this textbook picture is ruined and the lucid interval fails to appear. If unconsciousness persists and deepens and if there is a gradual development of hemiplegia or if any focal signs present immediately following the injury are showing signs of increasing, we should look for an extradural hemorrhage. This usually occurs within the first forty-eight hours on the same side as the injury. The hemiplegia, of course, will be on the opposite side, but the hemorrhage is on the same side as the injury. That is one place where an early x-ray is permissible. If the roentgenogram shows a line of fracture crossing the groove of the middle meningeal artery, we have substantiating evidence of extradural hemorrhage.

Subdural hemorrhage is at least five or six times as common as extradural hemorrhage and that, too, is frequently overlooked. It may occur early or its manifestation may be delayed for months or even years. The acute or early form follows the more severe injuries and is associated with the more severe brain damage, the signs and symptoms of which cloud the diagnosis. That, too, should be sought for when focal signs of hemiparetic nature appear or when the stupor or coma progressively increases, or in general when the patient fails to respond satisfactorily to the dehydration program previously outlined. The mortality rate is very high in these patients, at least 50 per cent.

The chronic or late forming subdural hematoma has only been recognized within recent years, or at least the frequency of it has only recently been recognized. It follows very trivial head injuries, so trivial that the injury may have already been forgotten. The bleeding no doubt takes place slowly. It is usually from one of the veins bridging across from the brain to the dura. Organization sets in, a pseudo-encapsulation is formed there, and certain chemical changes take place in the liquefied center of these hematomas whereby their osmotic pressure increases and they draw

more fluid into them, so that the most common symptoms are headache, which is often progressive in severity, restlessness, personality changes, and finally lapses into drowsiness and stupor. Many of these, of course, are mistakenly diagnosed as brain tumors or other lesions, even arteriosclerotic lesions of the brain. The final diagnosis depends upon keeping this condition in mind. When sufficient reason exists, exploratory burr hole openings may be made over the occipitoparietal region or the temporal region, because these usually cover a considerable part of the hemisphere of the brain. Both sides should be explored, because not infrequently these hematomas are bilateral, and there is nothing in the focal signs to tell definitely on which side the lesion may be found. Even the rule that the dilated pupil is most commonly on the side of the lesion is not always true. After incision of the dura and capsule, this hematoma is drained by suction through these burr hole openings. If there is a definitely organized clot, a bone flap must be made and the clot removed.

Chairman Cubbins: The main characteristic of these three papers, in addition to their thoroughness, is the total lack of useless words. If you followed the addresses of these men, you fond there has not been a lot of wind-batting without meat. It has all been substance that can be carried and carried carefully. This last paper is extremely valuable, in that the doctor has differentiated, with great care and great precision, the difference between the primary shocked individual, probably with multiple other injuries, from the individual who has had an injury with a marked increase of intracranial pressure alone. Too many men ran wild following Temple Fay with dehydration, when dehydration was not indicated. Here we have a bold paper, and the entire subject has been covered with an acuity which is almost unbelievable. The next paper is that on chest injuries by Dr. George P. Elvidge of Perry, Iowa.

CHANGES OF ADDRESS

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CHEST INJURIES*

GEORGE P. ELVIDGE, M.D., Perry

In discussing chest injuries it must be realized that the chest is a bony and muscular enclosure containing the heart, lungs and great vessels. It consists of the ribs and sternum with their attached muscles and is separated from the abdominal cavity by the diaphragm. Traumatism in this region necessitates a consideration of the following factors of clinical and pathologic importance:

1. There are a large number of arteries and thin walled vessels which are often involved in injuries, causing hemorrhage into the pleural cavity.
2. The presence of hemothorax, in the pleural cavity embarrasses the respiration and the circulation.
3. Infection of the pleural cavity carried from without, either through the chest wall or through the bronchi.
4. Injury to the diaphragm with a displacement of the abdominal viscera into the pleural cavity.

A simple contusion of the chest may cause first, a bruise with superficial swelling and discoloration; second, a fracture of one or more ribs; third, a chondrosternal separation of the ribs; fourth, a fracture of the sternum; and fifth, an open wound of the chest wall that is extrathoracic, or one that does not penetrate the pleura, such as knife wounds, gunshot wounds and lacerations, oftentimes involving the muscular structure and perhaps a rib and often following the paths of muscular and fascia planes for some distance. In the recent Harlem series, 45 per cent of the cases were of this type.

A contusion of the chest well, with or without a fracture of a rib, may result in an area of pleurisy with a slight effusion. Such injuries comprise ten per cent of all chest injuries.

Concussion of the chest varies with the degree and type of trauma. It may be only a slight disturbance of respiration and then again it may be so pronounced as to result in sudden death. This condition is usually caused by hard, direct blows, falls from extreme heights and of late years, automobile accidents. The area of injury is usually directly over the sternum or precordium and involves the solar plexus. The mechanism of its production is not entirely clear except that a profound reflex stimulation of the vagus and sympathetic nerves occurs resulting in shock and a condition similar to cerebral concussion.

Contusion of the lung is common and the essen-

tial change is a hemorrhagic infiltration of the lung, either with or without a fractured rib. The area of lung involved is usually just beneath the trauma but it may be in the opposite lung, far removed from the site of injury. The diagnosis is based on the presence of hemoptysis, fever, signs of consolidation and x-ray findings. Laceration of the lung is usually produced by the end of a fractured rib or a stab wound. Hemothorax or pneumothorax of varying degree follows the injury.

Traumatic rupture of the lung is rare, but not as rare as formerly and results from severe trauma such as we see after automobile accidents. It is usually found in children and young adults because of the greater elasticity of the ribs which often are not even broken. The severe crushing injury tears the pleura and the tissues of the mediastinum as well as the lungs and large vessels. Death is usually sudden. If the patient survives the initial shock, pneumonia may invade the ruptured lung from the bronchi, the bleeding area being very susceptible to this infection. This is an important point because we often forget that a true or actual pneumonia rarely directly follows chest or thoracic injuries. The lesions which we take for pneumonias are usually hematomas of the lung since the areas contain no reticulum or organized exudate. Secondary pneumonia manifests itself some few days after the chest injury and is a serious complication. It may be found in the lung on the uninjured side as well as in the injured lung. It is usually the cause of death.

Traumatic asphyxia, compression rupture of a large bronchus, traumatic emphysema, traumatic pneumothorax and hemothorax are other lung conditions resulting from injuries, either compression or the result of penetrating wounds. Penetrating or open intrathoracic wounds of the chest are the type of injury caused by gunshot, shrapnel and stab wounds. The wound may extend into the lung, it may pass entirely through the lung and either imbed itself into the soft tissues of the back or make its exit; then again the injury may involve the diaphragm and the viscera below it. Because of the many blood vessels in the chest, hemorrhage is common and death from excessive bleeding may result.

Penetrating wounds are of two types, traumatopneic (sucking) in which air is drawn in and out of the open wound with each respiration and non-traumatopneic in which the opening is not of sufficient size to permit sucking. According to Reinhoff the ratio is about one to fifty. The sucking type is considerably more serious than the

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nonsucking wound because of the incidence of shock as a result of the constant variation of intrapleural pressure and oscillation of the mediastinum. Infections are much more common and both the circulation and respiration are much more embarrassed. Lacerations involving any of the numerous blood vessels complicate the condition and hemothorax and continued bleeding from the sucking wound usually result in a fatal termination. Non-traumatopneic wounds are much more common and not of such serious consequence. They are mainly small wounds not of sufficient size to permit sucking. Small areas of hemopneumothorax may be present and any symptoms arise from that condition. Because of the danger of small articles being driven into the chest cavity such as pieces of projectiles, bits of clothing and buttons and other extraneous material, all these cases should be x-rayed. This procedure often saves time and trouble at a later date.

Treatment of chest injuries varies directly with the severity of the injury. Minor chest bruises require only symptomatic treatment, perhaps a tight chest binder or moderate strapping with adhesive tape. More severe injuries require the most careful watching because of the disturbance in both circulation and respiration. Morphine or its derivatives should be used as sparingly as compatible with relief from severe pain, and it is a good plan to include atropine with it to prohibit the excess secretions of the respiratory tract. Much less trouble will be experienced from cough if this procedure is followed. If for any reason it is deemed advisable to prohibit the use of opiates hypodermically, cough mixtures containing morphine or codeine may well be substituted but it must be remembered that their reaction is not as quick nor as pronounced. Open wounds must be closed or packed and shock must be combated with rest, warmth and restoratives. Oxygen is indicated for cyanosis and shortness of breath. Loss of blood may require a transfusion of whole blood or plasma. Infections may be treated by using sulfapyridine or sulfathiazole and the advent of these drugs has done much to make recovery more certain and the convalescence more pleasant for both patient and doctor.

In conclusion, chest injuries may be severe, pronounced and disabling, or mild and nondisabling. Results depend largely upon the severity of the injury and the damage done to the chest and its contents. Prognosis should be guarded because of the possibility of complications and the dangers of infection. It should always be remembered that chest injuries heal slowly and that vague

chest pains are present for some time after disability ends.

Chairman Cubbins: I want to say again it has been a great honor to preside here this morning. I trust that some of my comments have not been too acidulous. In relation to the preceding paper, I want to repeat something that was strongly emphasized by Dr. Nicholas Senn. Some of you are old enough to have attended his clinics. In these fractures across the front of the chest, where a strapping with adhesive is inadvisable because it makes so much pressure upon the vascular system that it is rapidly fatal. Dr. Senn stated in his dramatic manner that the only possible method by which such an injury could be immobilized was with the use of opium. He seldom used the word "morphine," but emphasized that these injured must have enormous quantities of a sedative, in order to slow the respiration, lessen the pain and inhibit shock. In this manner we can tide these patients over the first three or four days, the period during which death so frequently occurs.

About three years ago, within a period of three months, it was my fortune to see the postmortem examination of three such cases. In each no morphine had been administered and in each, death was the result within forty-eight hours after the injury. The postmortem findings demonstrated only multiple fractures in the ribs and fractures of the sternum. Some surgeons think that pneumonia will result if morphine is administered under these circumstances. It has been our experience that unless these patients receive plenty of morphine they will not live long enough to have pneumonia.

CENTRAL ASSOCIATION OF OBSTETRICIANS
AND GYNECOLOGISTS TO MEET IN
DES MOINES

The fourteenth annual meeting of the Central Association of Obstetricians and Gynecologists will be held at the Hotel Fort Des Moines in Des Moines, Thursday, Friday and Saturday, October 22, 23 and 24, 1942. There is no registration fee and all physicians are cordially invited to attend and participate in the discussions.

The Association comes to Des Moines this year on the invitation of the Iowa Obstetric and Gynecologic Society, and it is hoped that many Iowa physicians will be able to take advantage of this opportunity to hear national leaders discuss recent advances in these specialties.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

THE DISRUPTION OF ABDOMINAL WOUNDS

F. P. McNAMARA, M.D., Dubuque

In 1931, Sokolov,¹ from an analysis of over 1,000 replies to a questionnaire sent to the surgeons of Europe, concluded that disruption of abdominal wounds occurred in between two and three per cent of all abdominal operations. His report renewed interest in this surgical catastrophe and there have been several reports upon it from clinics in this country. In 1941, Hartzell and his associates² collected reports of 1,458 cases and concluded that the incidence in this country was about 1.5 per cent with a mortality of 35 per cent. Thus it can be considered one of the most serious hazards confronting abdominal surgeons. The following case which is rather typical is cited to indicate the clinical course and the danger of this complication.

CASE REPORT

Chief Complaint: The patient, a white woman forty-five years of age, was admitted to The Finley Hospital May 15, 1942, with complaints of "frequent menstruation, backache, headache, bearing down feeling in the pelvis, pain in the lower abdomen and in the legs, and nervousness."

Family History: The patient's father had died of Bright's disease, but her mother was living and well as were two brothers, one sister and two sons. Her husband had died of heart disease.

Past History: The patient had had the usual childhood diseases. Appendectomy and the removal of an ovarian cyst were performed in 1915; tonsillectomy in 1918 and right-sided herniotomy in 1926.

Present Illness: For some time the patient had not felt as well as usual because of a bearing down sensation in the pelvis, backache, pain about the knees and headache. These symptoms became worse after the patient had been on her feet for some time and they were making her nervous.

Physical Examination: The general examination was negative. Locally the uterus was enlarged to between the symphysis pubis and the umbilicus. There were numerous varicosities over both legs. The vaginal examination showed relaxation of the pelvic floor with levator muscle separation. The uterus was enlarged to the size of a four and one-half month pregnancy because

of myomas. The adnexa were negative. The veins of the lower extremities showed numerous varicosities.

Provisional Clinical Diagnosis: Uterine fibroids; relaxed pelvic floor; varicose veins, lower extremities.

Course in the Hospital: The patient was operated upon the day after admission when one large and several smaller myomas were removed with the uterus. Because of the size of the largest myoma, there was considerable difficulty in its removal and because of hemorrhage, a transfusion was required. The patient left the operating table in only fair condition. She was placed in an oxygen tent and improved somewhat and the following day was given another transfusion of 500 cubic centimeters of blood. On the second day after the operation, she began to belch considerable gas and complained of nausea. The abdomen had become distended but was not tender. The temperature had risen to 103 degrees. Two days later it had fallen to normal and except for abdominal distention, the patient seemed improved. On the seventh day after the operation, the wound drained serosanguinous fluid and the skin layer of the lower end of the surgical incision was opened for drainage. The next day the patient was definitely worse and because of labored respirations and mucus in the throat, she was placed in an oxygen tent. That afternoon the entire wound opened and the intestines protruded from the wound. The temperature rose to 103 degrees and the pulse to between 130 and 140. She was in grave condition and after stimulation, the wound was resutured. At that time there was no evidence of healing of the wound. The patient died on the following day.

Final Clinical Diagnosis: Myomas of the uterus; relaxed pelvic floor; varicose veins of the lower extremities; postoperative abdominal distention; dehiscence of the wound.

AUTOPSY ABSTRACT

The body was that of a moderately obese white woman with a sutured surgical incision below the umbilicus. The abdomen was moderately distended. On opening the surgical incision there was apparently no attempt at healing and there was only a little serohemorrhagic fluid over the cut surfaces. There was no evidence of infection but since the body had been embalmed, no cultures were made. The peritoneal layer was closed and all the recent sutures held firmly. The peritoneal cavity was found to contain 150 cubic centimeters of faintly cloudy fluid, and several loops

of small intestine subjacent to the operative incision were adherent because of fibrinous exudate. Below this mass of intestine, the ileum and colon were collapsed; above the jejunum was dilated. The stomach and duodenum were also moderately dilated. The uterus was lacking and the operative incision in the pelvis was firm and clean. The appendix was also lacking. Otherwise the examination only showed slight arteriosclerosis, dilatation of the right heart, acute congestion of the viscera, edema of the lungs and varicose veins of each lower extremity. Microscopic studies added nothing new. The anatomic diagnosis is as follows:

Primary:

1. Multiple uterine myomas; operation I (hysterectomy); hemorrhage, secondary anemia.

2. Dehiscence of the surgical wound with evisceration of the intestine; operation II (resuture of the abdominal wound); fibrinous peritonitis; intestinal obstruction; acute dilatation of the heart; acute congestion and edema of the lungs.

Subsidiary:

Early arteriosclerosis; varicose veins.

COMMENT

In this case there was no apparent attempt at healing of the wound up to the eighth day after operation when disruption with evisceration occurred. This agrees with other cases reported in the literature in which the average time of wound separation is said to be eight days although it has been reported anywhere from two to thirty-three days after operation. In this case, considerable hemorrhage. The patient was obese and there was no history indicating a deficiency of ascorbic acid. However, the impression was obtained that obesity played a part in the failure of the wound to heal. There was no indication that the serum protein level was low although no analysis of the blood was made with this in view. Following the operation, the patient was given two blood transfusions of 500 cubic centimeters each and this procedure should have made the serum protein level normal. The immediate precipitating cause of the disruption was the abdominal distention which began on the second postoperative day and persisted in spite of nasal suction and other treatment. At the autopsy, the peritoneum and fascial layers were closed by the new sutures but the muscle and fatty layers showed no evidence of healing. In two other cases where dehiscence had been partial, the omentum or small intestine was found to have

seeped between the sutures joining the peritoneum and fascia and they had actually extended outward between the ununited muscle and fat layers although the skin sutures were intact. In each instance, the catgut sutures were in place, but in one the upper sutures had ensnared the protruding intestine. Certainly there was no indication in either case that the sutures were at fault but rather that the closure of the peritoneal and fascial layers was inadequate. This is in agreement with Freeman's³ experimental work.

GENERAL DISCUSSION

Disruption of abdominal wounds has been reported under various titles such as separation or dehiscence of abdominal wounds, evisceration, eversion of wound or prolapse of intestine. In general these terms signify complete separation of the wound edges. However, they also include partial separations which later result in ventral hernias. Complete separation with evisceration is recognized as a most serious complication and has a mortality of 35 per cent or more. According to Maes and his associates,⁴ Gusnar reported a mortality of 80 per cent. In our series of 830 autopsies there have been seven instances of partial or complete separation in addition to four cases with ventral hernias. In three of the recent cases, the skin sutures were intact but the lower layers of the abdominal wall were more or less widely separated as in the case described. In the others, the prolapsed intestine had been replaced in the abdomen and the wound resutured. Hesseltine and Bohlender⁵ estimate that there are 2,500,000 laparotomies annually in this country. If the incidence of wound separation and mortality is accepted as 1.5 and 35 per cent, respectively, this means that there are 37,500 cases with 13,000 deaths from this condition each year. Whether this estimate is exact or not, it certainly indicates the seriousness of the problem.

A review of the literature indicates that most surgeons who have investigated wound separation believe that there is a combination of etiologic factors. Among those mentioned more frequently are faulty technic, type and site of the incision, poor suture material, general debility of the patient, increased abdominal tension, allergy, deficiency of ascorbic acid and hypoproteinemia. In our series, all but two of the patients were obese and our impression was that the obesity was a definite factor in preventing the wounds from healing. Freeman's experimental

work on dogs showed that inadequate closure of the peritoneum caused the omentum or at times the bowel to be forced between loose stitches thus separating the outer layers of the wound. In two of our cases which came to autopsy without resuture, this had occurred. Some workers have condemned catgut sutures, but since dehiscence occurs with all other types of suture material it is probably not the latter which is at fault, although defects should always be guarded against. Debilitating diseases, especially malignancy and diabetes, have also been implicated but here again the fact that many cancer and diabetic patients heal normally indicates that there is some other factor involved. All investigators agree that increased abdominal pressure is a factor which usually precipitates the disruption of the wound and that every means should be utilized to prevent it. Coughing, hiccoughs and restlessness should be combated and overdistention of the intestines prevented by adequate preoperative care, gentle handling of the intestine at operation and by the early use of Wangensteen's method of decompressing the intestine. If intestinal obstruction is diagnosed, a second operation is imperative. Whenever the patient's general condition is such that nonhealing of the wound is considered a possibility, careful consideration should be given to the site of the operative incision; mid-line vertical incisions seem especially susceptible to disruption. In the past, the above factors were thought to be the most important ones in wound disruption. However, it was gradually realized that they were probably contributory, that failure of the wound to heal was the essential fact and that some other factor or factors were responsible.

More recently deficiency of ascorbic acid and hypoproteinemia have been implicated. Animal experiments^{6, 7 and 8} indicated that a deficiency of Vitamin C in guinea pigs delayed the healing of abdominal incisions and decreased their tensile strength. Bartlett and his associates also studied the ascorbic acid content of the tissues at the site of the wound as well as that of the plasma and concluded first that a sufficient depletion of Vitamin C reflected in a low plasma ascorbic acid level interferes with normal wound healing as measured by tissue ascorbic acid content and tensile strength; and second, that normal wound healing can be brought about by adequate Vitamin C therapy during the healing period in spite of low plasma ascorbic acid at the time of operation. Lund and Crandon⁹ concluded from their studies in which the latter served as a human guinea pig that a wound healed well after he had been on a scor-

batic diet for three months but not after six months and that Vitamin C deficiency may be a factor in failure of some wounds to heal. However, they believe most patients in this country have an adequate ascorbic acid storage and if treatment is indicated other vitamins such as thiamine hydrochloride and nicotinic acid should also be given in large doses.

Hartzell and his associates investigated the serum protein levels in a series of twenty cases of wound disruption with and without infection and found them to be low. They concluded that protein deficiency was an important factor in wound disruption and felt that both the ascorbic acid and protein levels should be restored and kept at normal levels whenever possible. In the discussion of his and Lund's papers, Lund praised the work of Whipple and his associates who had reduced wound disruptions at their hospital 80 per cent by merely improving their surgical technic. This would indicate that Lund believed good surgical technic is most important in preventing wound disruption, and that includes the restoration of any nutritional deficiency whenever possible. It also means alertness of the surgeon to prevent postoperative abdominal distention which is the precipitating factor in most instances. In a word, it means better surgery with all that the term should imply.

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STATE DEPARTMENT OF HEALTH



REPORT OF DIVISION OF CANCER CONTROL*

For the period January 1-July 1, 1942

EDMUND G. ZIMMERER, M.D., M.P.H., Director
Division of Cancer Control
Iowa State Department of Health

This second semi-annual report coincides with the close of the first year of the existence of the division. As yet, there are no reliable criteria by which one may judge the effectiveness of the program in controlling cancer. Part of our work is the securing of data sufficiently accurate to make this possible in the future. As yet, we can only summarize our activities and rely upon the knowledge that such work has been shown to be effective elsewhere.

A careful compilation of mortality statistics has been supplemented for the first time by a review of morbidity figures as obtained from tumor clinics and from 84 of the 132 hospitals in the state.

Mortality

During 1941, there were 3,532 deaths from cancer in Iowa, accounting for 13.8 per cent of all the deaths. The crude death rate for our state was 139.3 per 100,000 as compared with the national average of 121.2. While the crude death rate indicates an apparent increase, the adjusted rate by which the age factor is largely removed shows no significant increase in cancer deaths during the past ten years. This is further borne out by an interesting study (too lengthy for inclusion here) which we have made of the change in age of the population as compared with that of the nation as a whole.

Morbidity

During the year, more than 3,058 cancer patients were admitted to Iowa hospitals. This total was 5.6 per cent of all admissions. In addition, 1,529 patients were admitted to tumor clinics. Of these, 1,108 were diagnosed as ma-

lignant. Thus, we have records of 4,166 cancer cases under treatment. The endeavor is being made to establish the ratio between deaths and cases according to the probable duration of cancer in various sites. Some of the hospital records are found to be inadequate for accurate analysis. A record form is being prepared which, with the cooperative spirit shown by hospital managements, should prove useful and dependable in future studies. A compilation of hospital facilities in Iowa, such as the possession of suitable x-ray equipment, radium, laboratories and competent pathologists, has been made. Thus far, the survey shows no lack of ample facilities, both professional and physical, for adequate diagnosis and treatment of cancer in any part of the state.

Clinics

Since the last report, an additional tumor clinic has been established at Fort Dodge. Of the two clinics organized in Sioux City and Mason City six months ago, that at Sioux City is operating effectively. The one at Mason City, while approved, remains in status quo because of the calling to military service of so many of its members. Four clinics have been in operation during the past six months. During the year, more than 1,500 patients were admitted, 1,108 of them being diagnosed cancer—more than one-third as many were admitted to hospitals during the same period. Preliminary steps have been taken for the institution of other tumor clinics at Council Bluffs, Ottumwa and Dubuque. Despite the availability of facilities, however, it is reasonable to assume that many cancer patients are not receiving treatment because they do not realize the importance of early diagnosis and treatment and because they do not know where to apply for aid. Hence there is need for emphasis on a program of education.

Education

Since the last report 84 lectures have been given, making a total for the year of 109 in addition to four radio talks. The attendance totaled

*Presented at the meeting of the Advisory Board of Health, Des Moines, July 14, 1942.

10,316, an average of 95 per meeting. Seventy-four towns in 42 counties were reached. The audience included the following groups and agencies:

High Schools	24	Men's Service Clubs.....	7
Women's Clubs	19	Fraternal Organizations.....	4
Health Councils	16	Public Meetings	3
Nursing Groups	7	District Staff Meetings.....	3
Teachers Groups	3	Red Cross Classes.....	5
P. T. A. Clubs.....	3	Medical Societies	4
Farm Bureaus	3	Radio	4
Welfare Clubs	3		

At nineteen of these lectures, one or more films were shown. Two films on cancer have been loaned to responsible parties and have been shown on numerous occasions. There have been numerous interviews with doctors, consultations with interested laymen and wide distribution of literature. Happily the most cordial relationship exists between the Division and the Cancer Committee of the Iowa State Medical Society as well as its Speakers Bureau and also with the Women's Field Army of Iowa. To these groups we owe a considerable debt for making the way easy and pleasant.

While exigencies of the times require that efforts be given to more immediately important duties, it is hoped that the program of cancer control may be carried on without any loss of impetus.

TIDAL WAVE OF REQUESTS FOR BIRTH RECORDS

ERIC P. PFEIFFER, M.D., M.P.H., Director
Division of Vital Statistics
Iowa State Department of Health

The major effort of the Division during the first half of 1942 was concentrated on the avalanche of certified copy work which resulted from the declaration of war on December 7, 1941. The tidal wave of requests for these certified copies of birth certificates struck the first week in January, at which time the number of requests mounted from 4,000 to 10,000 per week.

The Division's personnel was increased from 36 to 100 people; for a time, a great deal of grief was encountered because of inexperienced, new employees. Three additional supervisors were added who possessed exceptional ability in office routine and personnel work, one being an accountant of exceptional ability in the accountability of money. Thus, it was immediately possible to turn a rapidly developing chaotic situation into an orderly routine.

The heavy workload began to taper off after the second week in February, and has continued to do so gradually since that time. During the month of June, we averaged 6,500 letters per

week. The staff engaged in certified copy work now consists of fifty-seven persons. All certified copies are issued within three days after a request reaches this office, with the exception of the occasional request which lacks sufficient data. In cases of this type, it is necessary to write a letter requesting more complete information.

At the present time, at least sixty per cent of the incoming mail has to do with delayed registration of births. The night shift was discontinued June 24. It is now possible with the reduced staff to accomplish successfully the required work during regular daytime hours.

FATAL CASE OF SPOTTED FEVER

On June 16, F. H. Clark, M.D., of Clarinda, reported a case of Rocky Mountain spotted fever by telephone to the State Department of Health. The patient, H. M., fifty-eight years of age, had onset of illness May 29, with headache, backache, chills, fever and vomiting. A fine macular rash was observed June 14; on June 16, skin lesions were generalized and petechial in character. Hospitalized in Clarinda, the patient was a resident of Missouri, living on a farm a few miles south of the Iowa line. He was totally deaf, making it difficult to obtain reliable information; there was no history of tick bite. Following three days in a comatose condition, death occurred on the evening of June 16. Report of the case was made to the Missouri State Department of Health.

SEVEN MORE CASES OF SPOTTED FEVER

During the latter part of June and through July 25, seven cases of Rocky Mountain spotted fever were notified to the State Department of Health. Symptoms of which the patients complained included chills, fever, headache, pain in neck or back, generalized aching, vomiting and delirium. On the third or fourth day of illness, pin-head to pea-sized macules appeared on arms and legs, later becoming generalized and petechial in character. Information regarding the eight cases thus far reported in 1942 is contained in the following table:

Pt.	Age	Sex	County	Onset	Rash	Reporting Physician
J.W.	56	M	Union	6/1	6/4	M. R. Paragas, M.D., Creston
J.H.	5	F	Decatur	6/5	6/7	F. A. Bowman, M.D., Leon
H.B.	75	F	Delaware	6/15	6/18	C. G. Thomas, M.D., Monticello
W.B.	60	M	Dickinson	6/15	6/17	D. M. Harris, M.D., Spencer
B.N.	17	F	Shelby	6/18	6/19	P. E. James, M.D., Elk Horn
J.B.	11	F	O'Brien	6/22	6/26	W. S. Balkema, M.D., Sheldon
S.S.	6	M	Lucas	6/30	7/2	G. F. Niblock, M.D., Derby
D.S.	13	M	Adair	7/1	7/10	E. T. Warren, M.D., Stuart

AN APPRECIATION

MARVIN F. HAYGOOD, M.D., M.P.H.
1885-1942

Modern public health lost one of its most enthusiastic and earnest workers in the death of Dr. Marvin F. Haygood on Sunday, June 28, 1942, from coronary thrombosis at the age of fifty-seven years.

He came to Iowa on November 1, 1936, to assume the directorship of the Division of Local Health Services in the State Department of Health with a background of special qualifications and experience for service in this state.

Dr. Haygood was born January 15, 1885, in Rose Hill, Alabama, and received his medical education at Emory University School of Medicine, Atlanta, Georgia, graduating in 1915. After completing a year of interne service at Grady Hospital, Atlanta, he practiced several years at Stilesboro, Georgia, and began his career in public health as director of county health work with the Georgia State Board of Health from 1918 to 1922. After this service he entered Johns Hopkins University School of Hygiene and Public Health for a year of special study in public health administration, receiving the Masters Degree in Public Health in June, 1923. He then was appointed health officer of the City of Knoxville, Tennessee, serving six years when he became superintendent of the Georgia State Tuberculosis Sanatorium from 1930 to 1935. Previous to coming to Iowa he was medical director of the Georgia Emergency Relief Administration.

Apart from his high qualifications and special talent for organizing local fulltime health services, his genial pleasing personality won him a host of friends throughout the state. The remarkable

progress of local public health services during the past five years bears testimony to his energy, enthusiasm and ability in this special field of human endeavor.

Dr. Haygood was a member of the Polk County and Iowa State Medical Societies, and the American Medical Association, as well as a member of the Southern Medical Association, American Trudeau Society and National Tuberculosis Association. He was an active member of the Iowa Public Health Association and a Fellow of the American Public Health Association. He is survived by his widow and two adopted sons, both now in foreign military service. His remains were sent to Cartersville, Georgia, for burial.

He had accepted a position as director of local health services with the Illinois State Department of Health, effective July 15, and was looking forward with happy anticipation to a still wider field of usefulness.

W. L. B.

SEASON FOR ENCEPHALITIS

Two cases of encephalitis were reported to the Department through July 21, one from Webster County, the other from Guthrie County. Encephalitis or encephalomyelitis is usually characterized by acute onset with headache, chills, fever, neck stiffness, muscular and joint pains and restlessness. Drowsiness, stupor or coma may be present depending upon severity. Spinal fluid examination shows a pleocytosis, the cell count varying from 150 to 300. Physicians who may observe cases or suspected cases are requested to notify the District Health office or the State Department of Health.

PREVALENCE OF DISEASE

Disease	June '42	May '42	June '41	Most Cases Reported From
Diphtheria	6	9	7	Butler, Decatur, Jackson, Polk
Scarlet Fever	72	131	77	Linn, Dubuque, Scott
Typhoid Fever	4	5	3	Black Hawk, Hamilton, Winnebago
Smallpox	2	3	12	Webster
Measles	833	1,166	613	Black Hawk, Linn, Scott, Woodbury, Pottawattamie
Whooping Cough	99	77	152	Des Moines, Scott, Polk, Bremer
Brucellosis	23	42	19	For the State
Chickenpox	172	414	183	Woodbury, Boone
German Measles	23	16	11	Clinton
Influenza	0	1	10	For the State
Mumps	272	441	307	Boone, Des Moines, Dubuque, Linn, Story
Pneumonia	38	110	34	For the State
Poliomyelitis	1	0	0	Boone
Tuberculosis	2	14	47	Des Moines
Gonorrhea	108	92	99	For the State
Syphilis	264	233	135	For the State

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CHAIRMAN OF WAR MANPOWER COMMISSION McNUTT SPEAKS PLAINLY

In a personal communication the JOURNAL has been asked by Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, to publicize in its columns an official statement from Mr. Paul McNutt on the procurement of physicians, and an editorial relative to the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, both of which appeared in the June 27 issue of the *Journal of the American Medical Association*. We are pleased to comply with this request. Mr. McNutt's statement is as follows:

"On June 8 I described to the American Medical Association at its Atlantic City meeting the acute need for physicians for the military services. I pointed out how far the recruitment of physicians lagged behind expected quotas. In conclusion I stated bluntly the fact, which could not have been evaded by any analysis, that unless voluntary recruitment progressed more rapidly some more rigorous form of selective service must be resorted to.

"Those facts were necessary in order to permit the medical profession to diagnose its own case. And the case is urgent; physicians are members of what is probably the most indispensable of all professions. Despite the harshness of the facts and the bluntness with which I had to state them, I felt that the profession should be informed.

"In fairness to the recruitment record of many of our states, it seems in order at this time to give the profession some further idea of how its problem is distributed. The failure of a sufficient number of physicians to volunteer for military service is not spread thinly over the whole coun-

try. There is an acute lag in certain populous states. Other states have supplied nearly all that they should supply.

"We need more than twenty thousand additional physicians by the end of this year. But eight states—New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio—should account for nearly sixteen thousand of that shortage.

"By contrast, sixteen states have fewer than a hundred physicians to go to reach the total number they should supply. In order not to deplete unduly available medical service in those areas, we are asking that the Medical Officers Recruiting Boards be withdrawn and that further enlistments from those areas be then discouraged except in the case of the men under 37 in the urban areas. Those states are Alabama, Arizona, Delaware, Idaho, Louisiana, Mississippi, Montana, Nevada, New Mexico, North Dakota, South Carolina, South Dakota, Utah, Vermont, Wyoming and Virginia.

"The acute problem for the next few months for those states is an equitable distribution of medical service within their borders. This will avoid the necessity for any consideration of plans to allocate doctors from other states to meet civilian needs.

"More than one hundred and thirty thousand physicians have returned their registration forms to the Roster for Scientific and Technical Personnel. Those forms are now being processed. When that work is complete we shall be able to give the profession a more comprehensive report on the relation of available medical service to wartime needs.

"The seriousness of the deficit in the number of physicians available for armed forces should not be underestimated. The need must be met. It will be met by one method or another. Neither must we underestimate the serious drain this puts on available medical services in civilian communities. It will mean long hours and hard work—sacrifices which will multiply the deep debt that every community owes to its physicians.

"It cannot be met simply by multiplying the hours of the physicians who are left. There will be a real need to exercise every possible means for minimizing unnecessary medical services in order that the real needs may be met.

"It is my belief that the lag in recruitment has been due chiefly to the fact that the individual physician has not realized the genuine urgency of the need. Measures must be taken which will bring those home to every individual. This means that there will have to be some education of the general public. Preventable illness must be re-

duced to a minimum. Unreasonable demands on the physician's time must be reduced to a minimum. Thus only may available medical service adequately cover the needs."

Dr. Fishbein's editorial states:

"The medical profession cannot be accused of failure to play its part in any way in relationship to the war effort. Every one who is participating in the recruitment of physicians recognizes that there have been what are now called innumerable 'bottle necks' to be cleared away from time to time as the effort has progressed. More than one hundred and thirty thousand physicians have already returned the registration blanks sent out by the National Roster of Scientific and Technical Personnel. These replies have been coded, and punch cards have been made for them. Any physician who has failed to receive an enrolment form from the National Roster should write at once to the National Roster of Scientific and Technical Personnel, in care of War Manpower Commission, 916 G Street Northwest, Washington, D. C., requesting that an enrolment form be sent to him.

"Shortly there will be sent to every physician who indicated that service in the United States Army Medical Department would be his first choice or his second choice a letter as follows:

War Manpower Commission
Procurement and Assignment Service
Washington
Procurement and Assignment Service for
Physicians, Dentists and Veterinarians

Dear Doctor:

You have indicated your willingness to serve the Nation in this great emergency. The Procurement and Assignment Service of the War Manpower Commission now calls on you to enter the Service. Please apply at once for a commission. You have been selected from among the available physicians in your community by a process that is believed to be fair and impartial.

Complete and mail the enclosed post cards immediately. The Office of the Surgeon General or his representative will provide the necessary application forms and authorize the time and the place for your physical examination.

Do not take any definite action regarding your practice until you receive specific instructions from the War Department. Each physician who is commissioned is routinely allowed fourteen days to wind up his affairs after receipt of orders from the War Department.

The rapidity of recruitment now in effect makes this communication necessary and requires your full cooperation. Please do not delay.

Sincerely yours,
Frank H. Lahey, M.D.
Chairman, Directing Board
Procurement and Assignment Service

"With this letter will be enclosed two postal cards, which will secure prompt action in relationship to the receipt of application forms and proper notification of the action taken in the responsible agencies in Washington.

"The needs of the armed forces for physicians are immediate; unquestionably those needs will be met. Physicians who are under 37 years of age and who have been classified by the Selective Service are susceptible to restudy of their situation and reclassification as these needs become more and more urgent. The medical schools, hospitals, public health departments, industrial concerns, in fact every agency utilizing the services of physicians, must cooperate by restudying the men classified as essential, so that only those who are actually essential in the most restricted sense of that word will be retained. All others must be made available as needed for the service of the nation in the armed forces.

"The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established to aid in the proper assignment of physicians in times like these to the tasks for which they are best fitted. Already this agency has been of immense value in the principles that have been adopted relative to the maintenance of medical education, hospital service and civilian health, as well as the study and evaluation of men for the Army and Navy medical departments. As the needs become more acute and the number of men available less, their task assumes increasing importance. The War Manpower Commission is now the agency under which the Procurement and Assignment Service functions. Through the activities of various subcommittees such problems as maintenance of essential staff members for hospitals, the determination of adequate medical service for the civilian population needs, of adequate personnel for urban, county, state and national health departments and the needs of industry are being given special consideration. The medical profession, as Mr. McNutt has repeatedly emphasized, has in these activities shown the way to scientific study and allocation of manpower in this emergency."

A TREATMENT FOR INFECTIOUS MONONUCLEOSIS

In these times when it is imperative to keep the man power of the nation at the highest possible level, any effective therapy for disabling illnesses should be publicized.

Infectious mononucleosis is a clinical entity of varying severity, not infrequently incapacitating the patient for several weeks. It is characterized by fever, angina, swelling of the cervical lymph

nodes and enlargement of the spleen and liver. The blood count in the first week may give no clue to the condition, but after the first week there is an absolute lymphocytosis. The lymphocyte in the condition is a characteristic cell with large slate-colored cytoplasms containing vacuoles. The diagnosis is confirmed by the heterophile agglutination test.

Therapy in infectious mononucleosis consists of the usual measures employed in any acute febrile illness, but no specific measures have been found. The drugs of the sulfonamide group have no influence on the course of the disease. Recently Hugh K. Berkley reports the prompt recovery of four patients with infectious mononucleosis following the intravenous administration of 100 cubic centimeters of convalescent scarlet fever serum. The author concludes that a uniform response to the same therapy in four cases is not proof of its specificity, but the results are suggestive, and warrant its future use in this condition.

MENTAL EFFECTS OF WARTIME UPON CHILDREN

Thus far American children have not had to experience actual war conditions such as bombings and shellings. Their world has, however, undergone a complete metamorphosis from one of peace time security and family life intact, to one of relative insecurity and, in many instances, to one of breaking up of the family circle through absence of a father, brother or other close relative in military service. The feeling of insecurity is largely brought about by conversations overheard in the home, by newspaper stories, pictorial magazines and by radio and moving pictures insofar as these relate to war. How may we expect our children to stand up under the strains of wartime, and what, as physicians, should be our advice to parents who consult us on measures to safeguard the mental reactions of their children during wartime?

An excellent discussion of the problem appears in the June, 1942, issue of the *Journal of Pediatrics*, in an article prepared by Dr. Bert I. Beverly of Chicago. Dr. Beverly explains that his article is a summary of the present ideas and material available. Much, of course, has been learned from the experiences of the British children. These factors combined with general knowledge of mental health make possible reasonably accurate predictions on children's reactions to various phases of the emergency. The "effect of war upon the minds of children," states Dr. Beverly, "depends upon the attitudes of parents, the age of the children and the degree of mental

health previously enjoyed by the children, as well as the dangers, risks and disruption of normal life which each one experiences."

It is gratifying to note that children of previously good mental health have stood up amazingly well, even under severe conditions such as prevailed in London during the period of heaviest bombing. Most of the unfavorable wartime reactions have occurred in children who were emotionally unstable before the war. Among British children, experience has shown that those in the age period of eight to twelve years have been less disturbed than younger children or adolescents. Their ability to relieve their emotions by play dramatization of war is the explanation advanced. Younger children, being closely dependent upon parents for security, have shown greatest anxiety when separated from them during blackouts or at times of evacuation. The burden has fallen heaviest, however, upon adolescents and youths. Uncertainties of the future are a major cause of worry to them. The acquisition of a job paying a high wage, accompanied by the sudden independence which such a situation creates and for which the youth is not prepared, has in many instances worked out badly.

The adverse mental reactions of children disturbed by wartime situations may be summarized briefly as follows. Infants respond to the anxieties of their parents by restlessness, crying and unhappiness. Preschool children are irritable and disobedient and may have night terrors, enuresis, stammering and negativism. School children express their fears and demand reassurance. Their school work may become poor, and they may resort to compulsive stealing and to vandalism. Among adolescents, anxieties are manifested by neurotic complaints, abdominal distress, choking spells, truancy and sex delinquency.

As the stress and strains of war increase in this country, and increase they will, it is imperative that careful consideration be given to the mental effect these will have upon our children. Dr. Beverly repeatedly points out the importance of parental attitude as a determinant in the attitude of children during wartime. As he says, "Children can 'take it' if their parents can. Parents establish good family morale when they recognize unreservedly the possible risks and dangers and discuss them openly with their children to the extent of each child's ability to grasp their significance, and when they give their children the assurance that, come what may, the members of the family will stand by one another until the end." * * * "The family program should continue as nearly as possible according to normal routine. Parents cannot eliminate all radio war

programs and war news. It is better, therefore, to discuss the progress of the war with the children." Finally, "The discussions should include planning for meeting the various situations should they arise. When plans are made with them children respect their parents, have faith in their honesty, and have confidence in themselves that they will be able to meet an emergency with the help of their parents."

FURTHER OBSERVATIONS ON THE USE OF THE SULFONAMIDES

Perusal of current literature continues to yield conflicting reports of dangers and benefits resulting from the use of the sulfonamides. We wish to call attention to two such reports appearing in the July 4 issue of the *Journal of the American Medical Association*. In the first of these Merkel and Crawford describe pathologic lesions produced by sulfathiazole in four fatal cases. Three of the patients were adults and the fourth was an eight months' old infant. Varying amounts of the drug were administered, but on none of the patients did the blood concentrations at any time exceed ten milligrams per one hundred cubic centimeters. The infant received only forty grains of sulfathiazole by mouth over a period of thirty-six hours. The fluid intake and urine output were known to be adequate in three of the cases.

At postmortem examination similar pathologic lesions were found in all four cases. The lesions were invariably microscopic in type and consisted of areas of focal necrosis corresponding to those seen in mice killed by excessive sulfathiazole in the diet. Such areas were found in the liver, spleen, bone marrow, lymph nodes, lungs and kidneys. The authors state that they do not wish to discourage the use of sulfathiazole, but desire only to point out possible dangers of the drug in addition to those now known, and to speculate as to whether or not the peculiar pathologic lesions found might be a cause of death in sulfathiazole treated patients.

In the second report Siegel conducted a study to determine the effectiveness of early administration of sulfadiazine in acute respiratory infections in children. In the group studied 54 children were treated with sulfadiazine at the onset of symptoms of respiratory illness and 55 others served as controls. The duration of treatment was usually for three or four days. Blood levels of sulfadiazine usually varied from four to six milligrams per one hundred cubic centimeters after the first day's treatment. No gross ill-effects were observed from the drug therapy. In general

the treated group recovered considerably more promptly than the untreated group, the duration of fever being on the average about 1.6 days in the former and 4.2 days in the latter. Hospitalization was required for twelve of the control cases, six of whom developed pneumonia, but was necessary for only two of the sulfadiazine treated patients. The author concludes from these preliminary observations that sulfadiazine can be advantageously employed early in the course of many acute respiratory illnesses. In some cases such a procedure might be an early form of therapy, in others a prophylactic measure.

Reports of the type cited herein are of greatest importance in contributing to the critical evaluation now in progress throughout the world relative to the fields of usefulness and possible dangers attending the use of these powerful therapeutic agents. Unquestionably many years and a great deal further observation will be necessary before hard and fast rules for sulfonamide therapy can be laid down. In the meantime it should be the duty of every physician to observe that outstanding principle of medical practice, "if you can do no good, at least do no harm."

THE GREATEST OF THESE

In the army there is a term called "latrine gossip" which covers all the unreliable tales which are voiced in army groups. In these days in medical circles one hears much of "latrine gossip" concerning this doctor or that doctor in his relation to military service, why he has or has not entered the service, and implications of ulterior motives and lack of patriotic zeal.

If ever there was a time when physicians should be charitable in their judgment or guarded in their speech it is now. Individual circumstances alter cases and individual circumstances are not common knowledge. The Procurement and Assignment Service and Army Recruiting Boards will decide each individual case on its own merits. Dislocations will unquestionably occur, but we are confident that every effort will be made to conduct investigations without personal prejudice.

All physicians must and will sacrifice to win this war. All the doctors cannot serve in the Army and in the Navy; many must be allocated to serve defense areas and to meet civilian needs. Whether the doctor is in uniform or making his round of calls he serves his country and his patients to the best of his ability and to the limit of his strength. So let us "give the devil his due"; let us be kind, and above all, let us be charitable.

SPEAKERS BUREAU ACTIVITIES

OUR RESPONSIBILITY

Within the next month or two the Speakers Bureau will announce its fall courses. In the past, the fall of each year has been the occasion for a renewal of county medical society meetings and numerous post-graduate medical courses conducted by the Bureau.

Of necessity the courses to be offered this year will be smaller in number. We feel, however, that attendance at these meetings will be doubly important. The hazardous and unpredictable times through which we are passing make it difficult to continue any normal existence. However, it is common knowledge that an effort to maintain normal relationships as much as possible is the most desirable manner in which to approach the solution of the many perplexing problems we all must face.

The rôle of the medical profession in this responsibility is to keep abreast of the many new developments in treatment which are even now coming out of this new World War. We can also be sure that civilian needs from a medical standpoint will not be materially reduced because our country is at war. One of the functions of the Speakers Bureau has been that of aiding physicians in their task of improving the quality of their care for individual patients. We expect to continue this policy and we sincerely hope that members who are called upon to stay at home will not forget that portion of their Hippocratic Oath which places upon them the burden of prescribing for their patients to the best of their ability and judgment.

NEW SCIENTIFIC RECORDINGS

The Speakers Bureau is pleased to announce that Dr. Willard O. Thompson of Chicago has granted permission for the transcription of his lecture on "Sex Hormones: Clinical Application." The recording is now ready for use and requests should be sent to the office at 505 Bankers Trust Building, Des Moines.

Dr. Raphael Isaacs of Chicago also has given the Bureau his manuscript on "The Diagnosis and Treatment of Anemia." This lecture is being recorded at the present time and will be available the latter part of August.

RADIO SCHEDULE

WSUI—Wednesdays at 10:00 a. m.

WOI—Wednesdays at 2:05 p. m.

August 5 Care of the Teeth—

Floyd W. Pillars, D.D.S.

August 12 Athlete's Foot—

James W. Young, M.D.

August 19 Summer Skin Troubles—

Maurice H. Noun, M.D.

August 26 Is Your Child Ready for School?—

Arnold M. Smythe, M.D.

POSTGRADUATE MEDICAL LECTURE FOR THE MONTH OF AUGUST

Eldora Cozy Coffee Shop 6:30 p. m.	August 25	Coronary Heart Disease Harold C. Bone, M.D., Des Moines
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SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF AUGUST

Wayne County Medical Society Corydon—8:00 p. m.	August 11	Chest Injuries Jerome R. Head, M.D., Chicago
Cass County Medical Society Atlantic—6:00 p. m. Atlantic Hospital	August 13	Sex Hormones: Clinical Application Willard O. Thompson, M.D., Chicago

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

REPORT OF THE NATIONAL AUXILIARY CONVENTION

Atlantic City, situated on an island five miles out from the mainland, with its constancy of charm, is one of the great convention cities of the world. Its board-walk which affords bicycling and promenades, its seafood, beaches and quaint shops with merchandise from all parts of the world and its exhilarating sea-breezes offer a magnificent vacation land.

The Twentieth Annual Session of the Woman's Auxiliary to the American Medical Association was called to order in the luxurious ball-room of Haddon Hall, June 16. Miss Margaret N. Wolfe, secretary in charge of the central office, Room 410, 43 East Ohio Street, Chicago, Illinois, was presented and extended a cordial invitation to all Auxiliary members to call at the central office when in Chicago.

At the luncheon Tuesday noon honoring the past presidents, Dr. Frank Lahey, President of the American Medical Association, brought greetings. Dr. W. W. Bauer, director of health education of the American Medical Association, urged the distribution of *Hygeia* and Mrs. Augustus Kech, a past president and director of health in Pennsylvania, told of her success with *Hygeia*.

At the Annual Luncheon held in the Rutland Room Wednesday noon, Dr. Fred Rankin, President-Elect of the American Medical Association, praised the work accomplished by the Auxiliary and urged the women to concentrate their efforts for the betterment of public health, asserting that would be the best contribution they can make to the war effort. He said "This is a war of survival. We must understand that we fight with unscrupulous brutal enemies in a conflict whose technic by reason of motorized and mechanical equipment of warfare is not only an entirely new technic but one of savagery employed against both armed forces and civilian population. Physicians who have retired must return to practice to fill the shoes of younger men being taken into service with our armed forces."

Dr. Morris Fishbein, Editor of the *Journal of the American Medical Association* declared, "Doctors' wives must guard the nation's health in emergency." He called upon doctors' wives to assume the leadership in keeping the country healthful. From three to five million women will be called from their homes during the next year into essential war work.

Through their observation of their husbands' work they are in a natural position to bring home to the people the importance of health education.

The opening meeting of the Convention of the American Medical Association in the Ball Room of the Convention Hall Tuesday evening was very impressive with the massed colors of the Allies, and many of the doctors in military attire.

At this meeting the House of Delegates conferred its distinguished service award for 1942 on Dr. Ludvig Hektoen of Chicago, now chairman of the advisory committee of the National Cancer Institute in Washington, D. C., and chairman of the committee on scientific research of the American Medical Association. This was presented by Colonel Fred Rankin, U. S. A., President-Elect.

The medical exhibit occupied five acres of floor space. One feature of the convention was twenty-five scientific exhibits presented by the government of Brazil and others by physicians from the Argentine, Chili, Colombia, Cuba, Mexico and Peru in the giant auditorium. It took 2,300 men nine days to assemble the 716 exhibits.

The Army Medical Corps exhibited at convention hall for the first time its new equipment to save the lives of thousands of soldiers during the present war, including a complete snow set, skis, snow-shoes, emergency first aid supplies and operating lights and portable x-rays.

They stressed the use of sulfonamide drugs in first aid equipment and the requiring of quantities of blood plasma in the war effort. The Army and Navy have already requested 1,280,000 units of dried plasma. Eighteen blood donation centers have been established to convert whole blood into dried plasma as fast as laboratory facilities can be found.

Dr. Raimundo De Castro, Havana, Cuba, was the guest speaker at the annual dinner for members, husbands and guests Thursday evening. He told us of the effort the women of Cuba are putting forth in this emergency. Dr. Benvenuto R. Dino of the Philippines, Dr. Fred Rankin and Mrs. Frank Haggard were our honored guests.

We are twenty years old now and 27,636 members strong, marking an increase of 550 members. The total registration was 988. Mrs. Frank Haggard, San Antonio, Texas, was chosen president, and Mrs. Eben J. Carey of Wauwatosa, Wisconsin, was

named president-elect. There were 131 voting delegates. Mrs. John Rieniets, Cedar Rapids, was one of the delegates representing Iowa.

Mrs. David Allman and her committees proved to be very charming hostesses and left nothing undone to make our stay a pleasant one.

Mrs. F. W. Mulsow, President

THE IMPORTANCE OF THE BULLETIN

This year, *The Bulletin*, the national publication of the Woman's Auxiliary to the American Medical Association, will be the only medium of communication between the national officers and committee chairmen, and state and county officers and committee chairmen. It is very important, then, that all state and county officers become subscribers in order to receive information designed for them. Programs and suggestions for all committees will be found in *The Bulletin's* pages, as well as other timely and interesting material on subjects pertaining to the Woman's Auxiliary.

An effort is being made this year to make *The Bulletin* self-sustaining. For that reason every officer and Auxiliary member is asked to send in her annual subscription price, one dollar, at once. Complimentary copies are being eliminated, and in the interest of conserving paper, only copies to meet subscription lists will be printed.

The post-convention number goes to press in late July. This will be an excellent number with which to begin the coming year's activities. Send subscriptions to Margaret Wolfe, 43 East Ohio Street, Chicago, Illinois.

Mrs. H. I. McPherrin, Chairman

NURSES LOAN FUND

Although we have not been writing about our Nurses Loan Fund these past two months, our interest and enthusiasm have not been lacking and our fund has grown. As the war emergency becomes greater the demand for well-trained nurses increases. This should be a challenge to every doctor's wife, for her husband, whether at home or in the service, needs the help of just such a nurse.

We hear a great deal today about putting our dollars to work and doing our part in national defense. There is no better way to do both than to support this fund. If each Auxiliary member would earn or save \$1.00 during the summer months and donate it to the cause we could help several girls this winter. How small a sacrifice to assure every American good care wherever he may be!

In the following issues of the News Page we will attempt to answer any questions which may help to present a better understanding of our new project. Questions and donations may be sent to the chairman of the committee, Mrs. W. R. Hornaday, 3011 High Street, Des Moines, Iowa.

Question—Who may ask for a loan?

Answer—Any nurse who has completed her probation period in any accredited training school in Iowa.

Question—Why limit loans to girls already in training?

Answer—The committee felt it advisable that the girl show an aptitude for this type of training.

Question—Who will be the judge of this aptitude?
Answer—The instructors of her hospital.

Question—To whom should she apply?

Answer—The superintendent of nurses in her hospital. When sufficient funds are available to start loans, application blanks will be sent to all accredited hospitals.

Question—Who passes upon the loan after application has been made?

Answer—The Auxiliary Loan Fund Committee and a representative of her training school.

Question—Does the application require co-signers?
Answer—Yes, two.

Question—Is interest paid during training?

Answer—No, interest begins upon graduation.

Mrs. W. R. Hornaday, Chairman

BOOK NOTES

The summer months are not conducive to concentrated reading, and publishing is at a low ebb until fall, but there are a few titles which are worth considering. *Food 'N' Fun for the Invalid* by Florence Harris and Dorothy Riddler is an excellent book to have on hand any time because it contains menus, recipes, suggestions for attractive service, games, puzzles and many original ideas to be used for the convalescent or a permanent invalid in the home.

Dr. Bard of Hyde Park by J. B. Langstaff is a very readable biography of the distinguished eighteenth century physician who saved George Washington's life and who was a friend of Benjamin Franklin and other famous men of his day. Dr. Bard was a cultured man with varied social and political interests in addition to his brilliant professional career.

Those who missed *Doctors Don't Believe It—Why Should You?* by Dr. A. A. Thomen will enjoy the way he explodes many popular health fallacies and then proceeds to offer sane advice on ailments ranging from the common cold to cancer.

Alcohol Explored by H. W. Haggard and E. M. Jellinek is the story of alcohol with all its implications—physiologic, social and economic. This is a book for the serious reader.

Mrs. Keith M. Chapler

SPEAKERS BUREAU RADIO SCHEDULE

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WOI—Wednesdays at 2:05 p. m.

August 5 Care of the Teeth—

Floyd W. Pillars, D.D.S.

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Arnold M. Smythe, M.D.

SOCIETY PROCEEDINGS

Black Hawk County

An educational film entitled "Know For Sure", sponsored by the Venereal Disease Control Division of the State Department of Health, was shown at a meeting of the Black Hawk County Medical Society held in Waterloo, Tuesday, June 23. The film was presented and discussed by H. H. Ennis, M.D., of Decorah and R. M. Sorensen, M.D., of Des Moines, both with the Department of Health.

Greene County

The regular monthly meeting of the Greene County Medical Society was held at the hospital in Jefferson, Thursday, July 9. John C. Parsons, M.D., of Des Moines spoke on Pulmonary Tuberculosis as It Relates to the General Practitioner.

J. R. Black, M.D., Secretary

Lee County

The Lee County Medical Society held a meeting at the Hotel Iowa in Keokuk, Wednesday, June 24, with the following program: Diagnosis and Treatment of Tuberculosis in Childhood, J. Harry Murphy, M.D., professor of pediatrics, Creighton University School of Medicine, Omaha; and Diagnosis and Treatment of Surgical Shock, W. L. Sucka, M.D., assistant professor of orthopedic surgery, Creighton University School of Medicine, Omaha.

Taylor County

Robert M. Collins, M.D., of Council Bluffs, was guest speaker for members of the Taylor County Medical Society at their meeting held in Lenox, Tuesday, June 2. Dr. Collins spoke on The Modern Use of Hormones in Obstetric and Gynecologic Practice.

Webster County

The Webster County Medical Society entertained C. Allen Good, M.D., of the department of radiology, The Mayo Clinic, Rochester, Minnesota, as its guest speaker at the meeting held in Fort Dodge, Wednesday, June 24. Dr. Good spoke on Gastro-intestinal Bleeding, and supplemented his lecture with slides and a technicolor motion picture on procedures for locating gastro-intestinal pathology by means of x-ray.

Upper Des Moines Medical Society

The summer meeting of the Upper Des Moines Medical Society will be held at the Templar Park Pavilion on the west shore of Spirit Lake, Thursday, August 6. The morning program, which will begin at 10:00 a. m., is as follows: The Recruiting of Medical Officers, Colonel John I. Marker, M.C., U.S.A.; discussion by George H. Keeney, M.D., of Mallard; Endocrinologic Diagnosis in General Practice, Austin C. Davis, M.D., The Mayo Clinic, Rochester, Minnesota; and Fractures of the Clavicle, Carroll O. Adams, M.D., Mason City. The afternoon session, scheduled to follow the twelve-thirty luncheon, consists of Some Problems Concerned with Diseases of the Thyroid Gland, R. A. Sprague, M.D., The Mayo Clinic, Rochester, Minnesota; Placenta Previa, Diagnosis and Treatment, William F. Mengert, M.D., Iowa City; Anorectal Infections, Raymond J. Jackman, M.D., The Mayo Clinic, Rochester, Minnesota; and Anesthesia in Rectal Surgery, R. Charles Adams, The Mayo Clinic, Rochester, Minnesota.

PERSONAL MENTION

Dr. Ira D. Nelson, who for the past eight years has been superintendent of the Sac and Fox Indian Sanatorium at Toledo, has been transferred to Albuquerque, New Mexico, where he will be executive medical officer for the United Pueblo Agency.

Dr. Kenneth K. Hazlet has recently located in Dubuque, where he will limit his practice to internal medicine and neurology. Dr. Hazlet was graduated in 1937 from the State University of Iowa, College of Medicine, and has spent the past four years there in the departments of internal medicine and neurology.

Dr. Charles A. Waterbury, Jr., has located in Waterloo in offices adjoining those of his father. He was graduated in 1940 from the State University of Iowa, College of Medicine, and interned for a year at Ancker Hospital in St. Paul, following which he took a year of special pediatric work at the University of Minnesota Medical School.

Dr. Charles F. Obermann of Cherokee spoke before a recent meeting of the Marcus Rotary Club. He discussed various mental problems facing countries at war and described new forms of treatment for mental diseases.

Dr. John C. Peterson, Jr., has located at Hartley and will be associated with Dr. W. C. Hand in the Hand Hospital. Dr. Peterson was graduated in 1941 from the State University of Iowa, College of Medicine, and recently completed his internship at St. Luke's Hospital in Duluth, Minnesota.

Dr. Clifford D. Mercer of West Union has retired from active practice and Dr. Leslie L. Carr, with whom he has been associated for the past year, will take over the entire practice.

Dr. Wilson C. Wolfe, who has practiced in Ottumwa for the past two years, has gone to Knoxville, Tennessee, where he will take up a residency at the Knoxville General Hospital.

Dr. Henry W. Clasen of Dike has opened an office in Cedar Falls and will divide his time between the two offices. He will spend his forenoons and evenings in Dike and the afternoons in Cedar Falls.

Dr. Emil M. Christensen, formerly of Chicago, Illinois, more recently of Sumner, has located in Garner where he is taking over the practice of the late Dr. George A. Bemis.

Dr. Peter George has become associated with Drs. Otis R. Wolfe and F. L. Wahrer in Marshalltown. He is filling a locum tenens for Dr. Russell M. Wolfe, who will soon accept a commission in the United States Navy.

Dr. Chauncey M. Gillespie has moved to Grimes from Melcher, where he has been practicing for the past two years.

Dr. Valentine J. Meyer, who has been practicing in Mondamin for the past twenty years, has moved to Glenwood where he has accepted a position on the staff of the State Hospital.

DEATH NOTICES

Bemis, George Arthur, of Garner, aged fifty-eight, died June 30 of coronary thrombosis. He was graduated in 1909 from the State University of Iowa, College of Medicine, Iowa City, and at the time of his death was a member of the Hancock-Winnebago Medical Society.

Bickley, William Henry, of Waterloo, aged sixty-five, died July 3 in Chicago after a heart attack. He was graduated in 1900 from the New York Medical College, New York, and at the time of his death was a member of the Black Hawk County Medical Society.

Brannon, Patrick J., of Denison, aged sixty-six, died suddenly June 11. He was graduated in 1904 from the Sioux City College of Medicine, and at the time of his death was a member of the Crawford County Medical Society.

Campbell, Cassius Lightner, of Atlantic, aged eighty-five, died June 16 as the result of a paralytic stroke suffered three months ago. He was graduated in 1881 from Miami Medical College, Cincinnati, and at the time of his death was a Life Member of the Cass County and Iowa State Medical Societies.

Gifford, Albert Kirby, of Cedar Rapids, aged sixty-six, died suddenly July 5 at a summer resort near Watertown, Minnesota. He was graduated in 1907 from the University of Western Ontario Medical School, Ontario, and at the time of his death was a member of the Linn County Medical Society.

Haygood, Marvin Fletcher, of Des Moines, aged fifty-seven, died June 28 of coronary thrombosis. He was graduated in 1915 from Emory University School of Medicine, Atlanta, and at the time of his death was a member of the Polk County Medical Society. More extended biographic notes will be found in the State Department of Health section of this issue of the JOURNAL.

Marston, Charles Lemuel, of Mason City, aged seventy-two, died June 25. He was graduated in 1893 from Rush Medical College, University of Chicago, and at the time of his death was a member of the Cerro Gordo County Medical Society.

Parker, William Wallace, of Floris, aged sixty-nine, died June 27. He was graduated in 1896 from the University Medical College of Kansas City, and at the time of his death was a member of the Davis County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. PAUL E. GARDNER, New Hampton

DR. JOHN T. MCCLINTOCK, Iowa City

DR. HENRY G. LANGWORTHY, Dubuque

DR. WALTER L. BIERRING, Des Moines

History of Medicine in Johnson County

GEORGE C. ALBRIGHT, M.D., Iowa City, Iowa

The history of the medical profession in any county of Iowa seems to follow a fairly well established pattern. Usually a list of the early members of the medical profession is given. Depending upon the amount of space available, and the energy of the writer, brief or extended biographic sketches of these men accompany the list of names. In a few of the counties of Iowa other points of interest enter which are not confined to the members of the profession.

After presenting the individual biographies, or sketches, of the early members, not infrequently we find considerable space devoted to the avocations of these physicians. While all these early practitioners devoted full attention and abilities to their patients, the number of these patients was small and the remuneration received from them was not adequate to the physician's needs. Hence we often find that the avocations of these men, politics, farming, surveying, even day labor, were invoked to supplement their scanty incomes.

Interesting, too, is the record of the early struggles of these men to form themselves into societies. Usually these societies were formed ostensibly to further the science of medicine and to promote cooperation and better feeling among its members. However, one cannot read the histories of some of these societies without the feeling that the objective of the formation of medical groups within the county was sometimes aggressive rather than altruistic. This is true in Johnson County.

Fortunately for the present history, the enumeration of the pioneers has been adequately presented in Dr. Fairchild's "History of Medicine in Iowa" from its early settlement to 1876. Before appearing in book form in 1931 this history was printed in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. Short but complete biographic sketches of thirty-one medical pioneers were presented.

Additional light is thrown on the roster of the pioneer physicians of Johnson County in the schol-

arly volume "Old Stone Capitol Remembers" by Benjamin Shambaugh, published by the State Historical Society. His work covers the period from 1843 to 1847. Particular attention is paid by Dr. Shambaugh to the life of Dr. Henry Murray, who, the author felt, was the first doctor of medicine to open an office in Iowa City. According to the History of Johnson County¹ he was also the first doctor in Johnson County. Priority claims have been made for one Dr. Teebles, and for Dr. Isaac N. Lesh. Dr. Teebles, however, seems to have lived just over the line in Washington County and Dr. Lesh was not a doctor although he had "read medicine" for a time.

Inseparably associated with the history of medicine in Johnson County is the history of the formation and development of the College of Medicine. This history has been adequately presented in the series of excellent articles by Dr. John T. McClintock, which appeared in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.² In this series, Dr. McClintock traces the history of the medical school from its earliest inception in the mind of Dr. W. F. Peck of Davenport, in 1867-1868, up to and through the first school year, 1870-1871. That year began September 20, 1870. (The regular lectures began two weeks later with thirty-seven students enrolled.) The entire medical faculty numbered fourteen. Of these eight were non-resident, and it is reasonable to assume, were only part time. This system prevailed until 1915 when the last non-resident man, Dr. James Guthrie of Dubuque, Head of the Department of Obstetrics and Gynecology, was succeeded by Dr. W. R. Whiteis, a resident of Iowa City. Dr. Guthrie was also Dean of the College of Medicine. His successor was Dr. L. W. Dean. Dr. McClintock gave rather full biographic sketches of these first faculty members. He was fortunate in that he knew personally some of these men in their later years.

There is, therefore, no need of repeating either the history of the early physicians or of the College of Medicine. Full attention may be given to the formation and growth of the Johnson County Medical Society and its predecessors.

The earliest mention of a Medical Society is recorded in the History of Johnson County.³ The first reference to medical organizations is a notice dated May 10, 1843, published in the Iowa City papers, stating that "the adjourned meeting of the Iowa Medical Society will be held on Monday, the fifth day of June next, in Iowa City." It is signed "By Order of the President", Ezra Bliss, Secretary.

The next reference appears soon after the above. It reports the formation on June 3, 1843, of a Society which was to be known as "The Medical Botanic Society of Johnson County, Iowa Territory". This same article gives the list of officers. Some, but not all, were physicians. The spirit of reform, even at this early date, seems to have been present. In the address delivered that night, by one Dr. Metcalf, "It was clearly demonstrated that the present state of things called loudly for a reform in the practice of medicine . . . that such reform has been introduced and notwithstanding, it has waded through an opposition paralleled only by that arrayed against the Christian religion, yet it begins to stand forth pre-eminent, wearing a wreath of truth and reason, and bearing in triumph the laurels of victory, until it has overcome the prejudices of more than three and one-half millions of the inhabitants of these United States; and that it only needs an investigation to be adopted by every candid thinking mind". The Society ordered by resolution that the proceedings above given be published in both papers of Iowa City. Just what this triumphant "reform" may have been, we are not informed.

The date of the formation of the Johnson County Medical Society then seems to be a little obscure. Fairchild, in his history, gives it as August, 1855. He states that Dr. Frederick Lloyd of Iowa City has furnished very full and interesting biographic sketches of the early physicians who practiced in Johnson County. He then quotes Dr. Lloyd verbatim as he records the formation of the Johnson County Medical Society:

"It was at the meeting of the physicians of Iowa City to attend the funeral of Dr. Morse (August, 1855), that the Johnson County Medical Society had its first inception. It was soon after organized and flourished for many years until in 1869, dissensions, the bane of medical organizations, took place in it and a division followed which resulted in the incorporation of the society by a respectable part of the membership which formed the dissent-

ing minority. The incorporated society maintains its organization (1875) while the other has recently performed its last official act by declaring in a published form its own dissolution".

Additional evidence of this dissolution, and the "maintenance" of the incorporated group, is found in the Medical and Surgical Directory of Iowa, by Charles H. Lothrop, published 1876. He described the Johnson County Medical Society as follows:

Organized January 3, 1870.

Meetings are held on the last Saturday of each month. It is an incorporated body, and has a select membership of six.

Officers

President, T. S. Mahan, Iowa City; Vice President, Henry Murray, Iowa City; Secretary, Frederick Lloyd, Iowa City; Trustees, Henry Murray, David Stewart, Frederick Lloyd, Iowa City.

Members

Frederick Lloyd, Iowa City
Henry Murray, Iowa City
T. S. Mahan, Iowa City
David Stewart, Iowa City

The dissolution of "the other" as recorded by Lloyd, might suggest that the two groups had now united. However, in Lothrop's directory we find that the Iowa City (Johnson County) Medical Society was organized in 1876, with the following roster of officers:

President, E. F. Clapp, Iowa City; Vice President, R. W. Pryce, Iowa City; Secretary, E. H. Sheaffer, Iowa City; Treasurer, N. H. Tulloss, Iowa City.

Board of Censors

J. C. Shrader, Iowa City; Gustavus Hinrichs, Iowa City.

Nothing is stated of its membership. The Officers and Board of Censors are given. These numbered six. No one name appears in the roster of both societies, the Johnson County Medical Society organized in January 1870, and the Iowa City (Johnson County) Medical Society, organized in 1876. It is safe to assume that for a time following 1876, two societies still existed in Johnson County.

In the history of Johnson County (1883) we find the following, which details some of the activities of the Johnson County Medical Society from 1856 (1859?) until 1875. This is quoted in full:

"Resolved, That the Johnson County Medical Society (a quorum of whose members is now here present), which was organized on the 27th of May, 1856, and the last meeting of which, as appears from the minutes now before us, was held

December 31, 1859, is hereby reorganized and revived by this meeting.

"The medical gentlemen reported present at this reorganization meeting were: Drs. Sanford W. Huff, Frederick Lloyd, T. S. Mahan, A. C. Moon, Henry Murray, J. C. Shrader, J. H. Ealy, William Ott.

"On May 25 another meeting was held, and the following officers elected: President, Dr. Huff; Vice President, Dr. Ealy; Secretary, Dr. Lloyd; Treasurer, Dr. Ott; Librarian, Dr. Mahan; Committee on Ethics and Admissions, Drs. Henry Murray, J. C. Shrader, and J. J. Sanders.

"Drs. C. A. White and O. Heinsius, of Iowa City; David Stewart of North Liberty, and F. C. Stewart of Solon, were made members. During the remainder of that year, 1867, some very good meetings were held, valuable reports made and discussions had. Dr. White was the State Geologist. Dr. Shrader seems to have been the leading surgeon at that time.

"Drs. George Mitchell, M. J. Morsman, C. C. McGovern, Robert M. Paddock and William Vogt, of Iowa City, were afterward members. The society continued to exist under the above name with varying fortunes for nineteen years, the first organization having occurred May 27, 1856, and the last recorded meeting on December 16, 1875. It does not appear that they ever sent a delegate to the national association."

The Iowa City Medical Society was a direct successor of the last mentioned one, and was organized January 10, 1876. Its first officers were: Drs. E. F. Clapp, president; R. W. Pryce, vice president; E. H. Sheaffer, secretary; N. H. Tulloss, treasurer. Censors, Drs. Gustavus Hinrichs and J. C. Shrader.

From the History of the Iowa City Medical Society, as it appears in the History of Johnson County, it would seem that the Iowa City Medical Society was the group which ultimately developed into the present Johnson County Medical Society. In addition to the list of officers mentioned above, (1876), the present (1883), officers are given: J. C. Shrader, president; Elizabeth Hess, vice president; S. S. Lytle, secretary; N. H. Tulloss, treasurer. Censors, Drs. C. M. Hobby, J. C. Shrader and Gustavus Hinrichs. The total membership was twelve.

Belief that this group was the real predecessor of the present County Medical Society is supported by the list of delegates to the National Medical Association: Dr. E. F. Clapp in 1876 at Philadelphia; in 1877 at Chicago; and in 1878 at Buffalo; and Dr. J. C. Shrader in 1877 at Chicago. In addition this group limited its membership to graduates recognized by the American Medical Asso-

ciation and adopted the code of ethics of the American Medical Association.

The foregoing history of the early pioneers and of the forerunners of the present County Medical Society terminates about 1883.

The rather interesting activities of some of these early men may be worth recalling. The ones most frequently mentioned are those which deal with the efforts of the different physicians to secure the work of caring for the poor. These are recorded in the history of Johnson County, above cited. Inasmuch as the account in this history is succinct it may be quoted in full. The following proceedings of the county board, October 9, 1841, will be both amusing and interesting, at least to medical gentlemen:

MEDICAL AND MISCELLANEOUS⁴

Medical History—County Physicians, Medical Societies, etc.

The First County Physician

"It having been made known to the physicians of Iowa City that proposals would be received on this day by the board of commissioners on what terms the medical attendance on all paupers should be given for one year, by either physician for one year, and furnish their own medicines, on this day, to-wit: October 9, at 3 o'clock P. M., the following proposals were received to-wit:

"Gentlemen: I, in accordance to your wishes, as physician for all the paupers of Johnson County, Iowa territory, do hereby obligate myself to attend professionally and furnish all necessary medicines for them, for the sum of seventy-five dollars annually."

Yours, gentlemen, with respect,

HENRY MURRAY, M.D.

Iowa City, October 9, 1841.

To the honorable board of county commissioners of Johnson County:

"We whose names are hereunto subscribed (physicians of Johnson county), make a joint application for rendering medical services to, and medicines to the paupers of this county, from this date to the 1st of October, 1842, under the direction of the board of county commissioners, or their agent, for the sum of twenty-five dollars each."

JESSE BOWEN

EZRA BLISS

S. M. BALLARD

"These proposals being in effect of equal amounts, it was motioned by Mr. Parrott, one of the board, 'Shall we select from the proposals which shall be accepted?' Mr. Cavanagh and Mr. Clark were opposed to the acceptance of either proposal as they now stand. Mr. Parrott votes

for selecting, and Mr. Cavanagh objects because the word each was added to the last recorded proposal after the same was delivered and opened by the board, so Mr. Parrott's motion was lost.

"Mr. Cavanagh then motions that the services mentioned in the aforesaid recorded proposals be let to the lowest bidding physician or physicians, which motion was agreed to by Mr. Clark and dissented from by Mr. Parrott. So the motion of Mr. Cavanagh was carried, and the same being set up at public outcry, Dr. Henry Murray being the lowest bidder, at the sum of six dollars, became the physician as employed by the board according to the proposals and the actions on them aforesaid."

The County Physician Problem Again

October 6, 1842, the county board appointed Doctors Murray and Bliss to be county physicians, to furnish all medicines themselves for pauper patients, make out their separate bills, and at the end of the year the county board would allow them a pro rata compensation out of a total fund of \$100 for the whole year. October 8 Dr. H. Murray wrote a note to the board, emphatically saying, "I will have nothing to do with the partnership affair of doctors for the paupers of Johnson County."

It seems that Dr. Bliss went on acting under the partnership affair, but somehow or other things did not go smoothly, for on January 6, 1843, the following further proceedings were had on the pauper-doctor difficulty:

"The object of this meeting being at this time to take into consideration the propriety of letting out medical attendance to paupers for one year from the October term of this board, 1842, to the lowest bidder. One of the physicians appointed at that time having refused to accept the appointment.

"On consideration of the premises, it is ordered that the order made on yesterday on this subject, be expunged from the record.

"And it is also ordered that Dr. Ezra Bliss be allowed the sum of thirty-seven dollars and fifty cents in full compensation for his medical services to paupers since the October session, 1842, and that order and contract entered and made at that time, be mutually and is hereby rescinded.

"And now, on this day, to-wit, January 6, 1843, it is ordered and agreed on the part of the commissioners, that the sum of one hundred dollars shall be appropriated out of the county treasury, for the payment of physicians for their medical attendance and services rendered to paupers in this county for one year from this date. It is

understood by the board that sick paupers shall have their choice of physicians in this county, and that the sum above named shall be paid to the physicians so employed, in proportion to actual services rendered by them respectively, and it is further understood that each physician shall furnish his own medicine, and present the bills to be adjusted at the January term of this board in the year 1844."

The expression by the board, "that sick paupers shall have their choice of physicians in this country", seems to have been a direct resentment of the assumption of the allopathic class or school of doctors that they alone were "regular" and entitled to public recognition as physicians. Whether they wanted an allopathic, a homeopathic, a botanic or an eclectic doctor, they might take their choice; the county board would treat all schools of doctors on the same footing.

Physicians' Bills

The following from county record of January 7, 1856, will be interesting to the doctors:

"Ordered, that Dr. S. M. Ballard be allowed sixty-five dollars for his medical bill to paupers since January 1, 1845.

"Ordered, that Dr. S. R. Crummey be allowed his medical bill to paupers since January, 1845.

"There being twelve dollars not yet appropriated and Dr. Murray's bill of \$20 not being satisfactory to this board, and \$6 of Dr. Crummey's bill being also unsatisfactory it is ordered, that if Dr. Murray and Dr. Crummey shall hereafter establish their bills as being properly chargeable to the paupers, that the said sum of twelve dollars shall be allowed and divided in proper proportion between them."

The county seems to have had a good deal of trouble with its pauper-doctor business. On January 7, 1847, this record appears:

"Dr. Henry Murray presented his medical bill for services rendered by Murray, McCormick and Swan to paupers during 1846, amounting to \$47.00; which being investigated by the board, it is ordered, that the said Murray, McCormick and Swan, be allowed the sum of \$38.50 on said bill out of any money in the treasury not otherwise appropriated.

"Dr. Enos Metcalf presents his bill for medical services to paupers in 1846, amounting to \$25.00; which being fully investigated by the board, it is ordered, that he be allowed fifteen dollars on said bill, provided that the amount of the taxes due this county by him, shall be paid the treasurer of this county out of the above amount of fifteen dollars."

In the last few years physicians in Johnson County have avoided a great deal of difficulty arising from the rendering of bills to the county supervisors for services rendered to the poor, by having those bills questioned, and then reductions by the Board of Supervisors are arbitrarily made. Most important of all for avoiding those personal jealousies among the members of the profession, they have worked out the plan of contract practice with the Board of Supervisors. Services by the entire group of practicing physicians are to be rendered to the unfortunate poor for a stipulated sum per indigent family. This allows the patient to have the physician of his or her own choice and avoids all quibbling over bills for services rendered.

From 1883 to 1912 the records of the Society have been completely lost. This may be in part due to loss of records in the fire of 1901, which destroyed the home of the College of Medicine. Inasmuch as most of the members of the Society were also members of the Faculty of Medicine, this assumption does not seem to be very far-fetched. On the other hand, as one looks over the records from 1912 to the present time, which we have every reason to believe are preserved in their entirety as they were recorded, one cannot escape the feeling that the incompleteness of records in the first years from 1912 to 1927 may have been due simply to failure on the part of physicians to make such records.

The record of some of these years, taken at random, serves to illustrate this failure. In 1912 no record is made of the number of members belonging to the Society. Four meetings were held during the year. The maximum number attending any one meeting was twenty-two, the minimum eight, and an average for the four meetings held was twelve members and guests. In 1917 no record of membership was kept. Nine meetings were held. The largest number in attendance at any one meeting was twenty-four, the smallest number five, with an average attendance of thirteen. At the May meeting of that year a "very interesting and well prepared paper on preoperative and postoperative treatment of prostatectomy", by the recently appointed head of genito-urinary service, Dr. N. G. Alcock, was presented to an audience of four members. Surely this was not an inspirational number. The interest and enthusiasm of the Society seemed to have reached its nadir in 1921, when there is brief mention of only two meetings, although a third meeting was held. There is no record of the number of members, and no record of attendance except for one meeting. Only six members attended that meeting.

In 1926 we find the record of six meetings with an average attendance of sixteen. Four meetings were held in addition to these of which no record was made. The names of the officers in these years are purposely omitted. All of them, save one, are living, and all of them, except one, are still members of the Society. We do not believe that they would be proud of the records they have left.

It is hard to assign a reason for the apathy which existed at this time. The writer began his association with the Society in 1917. To him it would appear that the principal factor in the situation was the inability of "town and gown" to work together. Certain it is that since the two elements have buried their differences and have learned to work together, the Society has enjoyed a steady growth and has developed an interest and enthusiasm at its meetings which are without parallel in the state. Substantiating that statement, the records show that in 1927 the Society had a membership of 76. Ten meetings were held and an average attendance of members and guests totaled 78. Following through the years when University men and town men shared the work and the responsibility for the Society, we find that in 1940, with a University physician as president and another as secretary, the membership of the Society reached 263, with an average attendance of 115. This was followed in 1941 by a city physician as president and a University man as secretary, with a membership of 246 and an average attendance of 109. It may well be the work of some future historian to trace the history of the Johnson County Medical Society from 1927 on. Unless there is a great lapse on the part of the officers, one can rest assured that for such a historian complete records of the Society will be at his disposal. The position of the Society is unique. Each year new physicians, to the number as high as eighty members, join and an approximate number leave its ranks. The new men are those young men who come for their internship and residency in the University Hospital. Those who leave have finished their service and have gone out into the practice of medicine in this, or other states. Recognizing their responsibility to these younger men and their debt to organized medicine, the older members of the Society insist that these young men shall begin at once to share in the work of the Society. At least one program of the year is presented entirely by the junior members. They are thus able to "try their wings" in a friendly atmosphere. The year or more of an association which they have with their instructors and with practicing physicians as

fellow physicians, and not as subordinates, gives them an impetus to go on with the work of the county medical societies wherever they may locate.

It may be that some of the guiding principles followed in the Society, which have led to this unusual growth and development, may be of interest to readers of the JOURNAL outside of Johnson County. It has been felt that the County Society is the foundation of all organized medicine, that its meetings should be in the nature of a post-graduate course. It is sound, educational theory, that the individual who presents a paper before any group will profit more than any member of that group. To this end, all programs, with the exception of one or two meetings, are prepared and presented by members of the Society. These one or two meetings are addressed by guest speakers. In order that there may be no feeling of superiority or inferiority, programs are given by practicing physicians and by the teaching staff of the University College of Medicine, in proportion to the numbers of each. A townsman may discuss a University man's paper and vice versa. All meetings are dinner meetings. It is felt that the fellowship engendered at the table is worth almost as much as the scientific program. All meetings begin promptly at six o'clock, and equally important, save when a guest speaker is present, the papers are definitely limited in time and the meetings adjourn as near eight o'clock as is physically possible, usually right at the hour. Knowing this, the practicing physician can make appointments, if necessary, a few minutes after eight and be able to keep them. The expense of the dinners is included in the annual dues, thus every member pays for his nine meals whether or not he attends. Junior membership, limited to the residents and internes, has very nominal dues. It is felt that some dues should be paid even though the income of these junior members is limited. However, the full part of the dues which might be considered as the dinner fees, is not charged to these junior members, the difference being paid out of the funds of the Society.

One of the most striking features of all of the meetings of the Society is the youthful appearance of its membership, due to the constant attendance of these junior members. Another striking feature which has been intimated, but needs repeating, is the absolute lack of distinction between the University men and the practicing physicians of the city and county. At the meetings these men are all physicians. No other requirement for membership exists.

"The rank is but the guinea's stamp.
A man's a man for a' that".

REFERENCES

1. History of Johnson County, 1883, Chapter Four, Part 2, page 307. (In the early eighties, enterprising publishers sent groups of writers, or research workers, into the various counties of Iowa. Their purpose, even though commercial, was to write the history of that county. It is easy to understand, then, that the names of individual authors do not appear in these early histories.)

2. McClintock, John T.: Historical statistics regarding the College of Medicine, State University of Iowa at Iowa City. *Jour. Iowa State Med. Soc.*, xxiii:103-106 (February) 1933.

3. History of Johnson County, 1883, Chapter Six, page 417.

4. History of Johnson County, 1883, Chapter Six, Part 4, page 415.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Committee on Maternal and Child Health

June 30, 1942

The Committee on Maternal and Child Health of the Iowa State Medical Society met in the central office Tuesday evening, June 30, 1942, at eight p. m. with the following persons present: Doctors H. E. Farnsworth of Storm Lake, R. H. McBride of Sioux City, H. A. Weis of Davenport, E. D. Plass of Iowa City, C. P. Phillips of Muscatine, J. F. Gerken of Waterloo, and L. F. Hill and J. M. Hayek of Des Moines.

The meeting was called to order by the chairman who asked Dr. Hayek to present a letter from the Children's Bureau offering the state of Iowa \$10,000 for obstetric and pediatric medical and hospital care of wives and infants of men (not commissioned officers) in the armed forces of the country. A proposed program utilizing the money was discussed and tentative plans made for accepting it. The committee also discussed the immunization program, and the meeting adjourned at eleven p. m.

Meeting of the Board of Trustees July 2, 1942

The Board of Trustees of the Iowa State Medical Society met in the central office Thursday morning, July 2, 1942, at ten a. m. Dr. O. J. Fay and Colonel John I. Marker of the board, and Dr. Robert L. Parker, secretary, were present. The following business was transacted: 1. Minutes were read and approved and bills were authorized. 2. The contract for printing the JOURNAL in 1943 was awarded to the Wallace-Homestead Company. 3. Salaries for 1942-43 were agreed upon. 4. Vacancies in committees were discussed but no appointments made until consultation with Dr. M. C. Hennessy, third member of the board. Meeting adjourned at noon.

Are You Going Into Military Service?

If so, notify The Journal, 505 Bankers Trust Building, Des Moines, Iowa, of your change of address, and receive your Journal regularly each month.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

THE 1942 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

BODY MECHANICS IN HEALTH AND DISEASE—By J. E. Goldthwait, M.D., L. T. Brown, M.D., L. T. Swaim, M.D., and J. G. Kuhns, M.D. J. B. Lippincott Company, Philadelphia, 1941. Price, \$5.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

IMMUNOLOGY—By Noble Pierce Sherwood, M.D., professor of bacteriology, University of Kansas. Second edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$6.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.

COMMUNICABLE DISEASE NURSING—By Theresa I. Lynch, R.N., Ed.D., Instructor in Education, New York University. The C. V. Mosby Company, St. Louis, 1942. Price, \$3.75.

GYNECOLOGY AND FEMALE ENDOCRINOLOGY—By Emil Novak, M.D., associate in gynecology, The Johns Hopkins Medical School. Little, Brown and Company, Boston, 1941.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schaufler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

BOOK REVIEWS

A TEXTBOOK OF CLINICAL PARASITOLOGY INCLUDING LABORATORY IDENTIFICATION AND TECHNIC

By David L. Belding, M.D., professor of bacteriology and experimental pathology, Boston University School of Medicine. D. Appleton-Century Company, New York, 1942. Price, \$8.50.

The timing of this excellent book with our participation in a war of world wide proportion is fortuitous. The movement of troops to geographic areas where parasitic diseases are common will give rise to new diagnostic and therapeutic problems. This volume meets the requirements of the army doctor or the civilian practitioner for the diagnosis, the laboratory procedures, the symptoms and latest therapy of the diseases of man caused by animal parasites.

This is a valuable book, the format is excellent, it is replete with illustrations and the text, though technical, is presented in a very readable and interesting manner. The material is divided into seven sections; general parasitology, the Protozoa, the Nemathelminthes, the Cestoidea, the Trematoda, the Arthropoda and a final chapter on technical methods for the diagnosis and treatment of parasitic infections, which gives the detailed instructions on the collection, preparation, staining, etc., for the detection of the various parasites. The last section contains a detailed description of the drugs which are useful in the treatment of parasitic diseases.

References are listed and a bibliography is added.

An index of authors and subjects is appended. This new and excellent volume is most highly recommended, and should be of immense value to physicians in all types of practice.

D. K.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY

By Jerome E. Andes, M.D., director of Department of Health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

The stated purpose of this book is "to provide a practical, simple, easily read text on the application of pathological chemistry to clinical medicine." Important, carefully selected technics are outlined, and the principles of interpretation of results are discussed. Many tables summarize much information in usable form, and the text includes a wealth of data concerning the chemical changes in many diseases.

Those well versed in the knowledge of pathologic chemistry will find the book somewhat elementary. Physicians not so well informed who wish to employ modern biochemical methods to their full extent of usefulness, will find it very worthwhile. It is also proving to be a handy reference for laboratory technicians.

R. F. B.

TEXTBOOK OF PEDIATRICS

By J. P. Crozer Griffith, M.D., emeritus professor of pediatrics, University of Pennsylvania; and A. Graeme Mitchell, M.D., professor of pediatrics, University of Cincinnati. Third edition, revised and reset. W. B. Saunders Company, Philadelphia, 1941. Price, \$10.00.

One of the important considerations in judging the value of a scientific book is knowledge concerning the qualifications of its authors. Each of the authors of this volume has been outstanding in the field of pediatrics for many years. Each has occupied a high place in the teaching profession. It is to be expected that a textbook prepared by them would be complete, authentic and thoroughly up to date.

Such is indeed the case with Griffith's and Mitchell's Textbook of Pediatrics. It is a single volume edition, abundantly illustrated; the descriptions of the various conditions are sufficiently comprehensive to give the reader his desired information on practically all pediatric problems. The reviewer has no hesitancy in recommending this book to general practitioners, pediatricians, students and to any others who desire a quick, accurate reference to modern conceptions of disease in childhood.

L. F. H.

SHOCK TREATMENT IN PSYCHIATRY

By Lucie Jessner, M.D., graduate assistant in psychiatry, Massachusetts General Hospital; and V. Gerard Ryan, M.D., assistant in psychiatry, Harvard Medical School. Grune and Stratton, New York, 1941. Price, \$3.50.

Because shock therapy has developed so rapidly and in so many clinics it is well to take stock of methods, results and conclusions. This has been most satisfactorily done by Jessner and Ryan in their recent monograph on the subject.

Insulin, metrazol and electric shock are thoroughly and clearly discussed, standard and proved methods of administration are described in detail, indications and contraindications are listed and sufficient statistical data from the authors' own experience and from that of others are given to authenticate their conservative conclusions. The various theories as to the modus operandi of the therapy are discussed.

This handbook constitutes a fine review for those engaged in shock therapy and to them the bibliography of 355 items will be especially gratifying. For those who wish to undertake shock therapy and for those who wish the information in order correctly to advise their patients, the book is indispensable.

That a manual on such a progressive subject must be frequently revised is illustrated by the fact that since publication the curare solution used to soften convulsions is now double the strength stated by the authors.

R. C. D.

MANUAL OF STANDARD PRACTICE OF PLASTIC AND MAXILLOFACIAL SURGERY

Prepared and edited by the Committee on Surgery of the National Research Council. W. B. Saunders Company, Philadelphia, 1942. Price, \$5.00.

This volume is the first of a series developed under the auspices of the Division of Medical Sciences of the National Research Council to furnish the medical departments of the Army and Navy with concise presentations of necessary information in military surgery. Succeeding volumes will cover the subjects of ophthalmology and otolaryngology; abdominal and genito-urinary injuries; orthopedic subjects; burns, shock, wound healing and vascular injuries; thoracic surgery, neurosurgery and peripheral nerve injuries.

This series of texts presents in compact form essential up-to-date and reliable methods of practice in military surgery, designed to qualify the physician in service to meet intelligently any surgical emergency. Even more important, it teaches what not to do in order to eliminate serious consequences of ill-advised procedures. Each presentation is prepared by an authority in that particular field of surgery.

This volume consists of a section on reconstructive surgery by Ferris Smith; a section devoted to the subject of maxillary surgery by Brigadier General Leigh C. Fairbank and colleagues; P. C. Lowery has written the chapter on maxillofacial prosthesis which includes artificial replacement of parts destroyed by injuries to the face and jaws; a final chapter by General Fairbank and colleagues is concerned with anesthetic techniques.

The authoritativeness of these volumes cannot be questioned, the timeliness of their publication and the necessity for them are all too apparent. They are clearly written, thoroughly illustrated and beautifully edited. The vast majority of military surgery will not be done by specialists. The army physician and the civilian physician who cares for civilian casualties will by study of these volumes avert the oft-repeated cry of "too little and too late."

D. K.

SEX EDUCATION IN HIGH SCHOOLS

By John Newton Baker, M.A., assistant professor of sociology, Virginia Polytechnic Institute, Blacksburg, Virginia. Emerson Books, Inc., New York, 1942. Price, \$2.00.

This is a small volume containing the data from a survey of the status of sex education in the high schools, obtained from the departments of education of the forty-eight states. The arguments pro and con on the subject of sex education are presented, the type of teacher who should present the subject, and a few courses of study are presented. For those individuals concerned with the problem this volume will prove of interest.

D. K.

FROM CRETIN TO GENIUS

By Dr. Serge Voronoff. Alliance Book Corporation, New York, 1942. Price, \$2.75.

This book is a group of philosophic essays bearing the common theme of attempting to analyze and prove the nature of mind and genius. We are told that genius is the result of chance meeting of complete sets of genius-bearing chromosomes, that genius resides in specific groups of brain cells, that it may be present in persons of high or low mentality and that to a considerable extent it is spontaneous and automatic.

The time-honored custom of citing the lives and works of the great or near great who may or may not be geniuses, and the performances of imbecilic prodigies, is used to illustrate and prove. The author's argument is interesting and provocative but there is nothing new or "daring" in his hypotheses except the dogmatic insistence on their factual nature and the idea that the projection of invisible grains of thinking matter constitutes thought.

R. C. D.

NEPHRITIS

By Leopold Lichtwitz, M.D., clinical professor of medicine, Columbia University. Grune and Stratton, New York, 1942. Price, \$5.50.

In this small volume, the author discusses nephritis as he has studied it for many years at the bedside and in the laboratory.

His viewpoint of nephritis is different in some respects from the customary one. This is emphasized in his discussion of diffuse glomerulonephritis which he considers an allergic disease. Charts and case records explain a simple method of analyzing renal function and urinary excretory capacity as used in diagnosis, prognosis and treatment. One is impressed by the fact that nearly all of the references are foreign.

This is an interesting treatise on nephritis and can be read with profit.

E. E. K.

SEXUAL DISORDERS IN THE MALE AND FEMALE

By Max Huhner, M.D., formerly chief of clinic, genito-urinary department, Mount Sinai Hospital Dispensary. Second edition. F. A. Davis Company, Philadelphia, 1942.

This is a new and revised edition of this practical volume, a sane and scientific treatise of a subject which has been given too little consideration by the general practitioner. Its content elucidates many problems which confront the physician in his relationship with the male patient.

The first part of the text is a thorough consideration of sterility in the male and female. The second

part deals with the subject of impotence and all of its organic and functional causes. The third part considers masturbation and part four discusses the various disorders of sexual function.

This is a good book which can be recommended as a scientific and practical presentation of a subject which in the past has been treated in a most unscientific and impractical manner.

D. K.

SEX FULFILLMENT IN MARRIAGE

By Ernest R. Groves, professor of sociology, University of North Carolina. Emerson Books, Inc., New York, 1942. Price, \$3.00.

This is a good book which cannot be offensive to the most fastidious layman, free from the sensational and the erotic which characterize most books on the subject.

The tenor of the book is the achievement of happy marriage, of which sex is only a part. The rôle which experiences and teaching in youth play in conditioning the individual to interfere with a happy adjustment is well brought out. There is a clear discussion of the male and female anatomy. The presentation is more in the nature of a marriage counsel than a book on sex, a guide to the acquisition of mutual affection and not a dissertation on technic.

This is a safe and excellent book to place in the hands of young people who need sane guidance on marriage relationships.

D. K.

COMING MEETINGS

American Congress of Physical Therapy will hold its Twenty-first Annual Session, September 9 to September 12, at the Hotel William Penn in Pittsburgh.

American Association of Railway Surgeons will hold its annual session in Chicago from September 10 to September 12. Secretary, Dr. Raymond B. Kepner, 547 West Jackson Boulevard, Chicago.

The fourteenth annual meeting of the Central Association of Obstetricians and Gynecologists will be held at the Hotel Fort Des Moines in Des Moines, Thursday, Friday and Saturday, October 22, 23 and 24, 1942. Address Secretary Dr. William F. Mengert, State University of Iowa, College of Medicine, Iowa City, Iowa.

American College of Surgeons, Thirty-second Annual Clinical Congress, will be held in Chicago, October 19 to October 23, instead of in Los Angeles as originally planned. The Twenty-fifth Annual Hospital Standardization Conference, sponsored by the College, will be held simultaneously. Programs of both meetings will be based chiefly on wartime activities as they affect surgeons and hospital personnel in military and civilian service. Address Secretary of the College, 40 East Erie Street, Chicago, Illinois.

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THE CHOICE OF TREATMENT FOR DUODENAL ULCER*

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What constitutes proper treatment of the patient who has a duodenal ulcer has been a more or less controversial subject for many years. There are those who favor medical management to the virtual exclusion of surgical treatment, whereas others are equally enthusiastic about the results which may be obtained by surgical measures. The present discussion is offered with no attempt to be dogmatic or to settle all details pertaining to the treatment of duodenal ulcer, but merely to consider some of the problems of this subject on the basis of personal experience.

At the present time it is pretty well agreed that there are definite indications for both medical and surgical treatment and that both forms of therapy may be followed, under certain circumstances, by either favorable or unfavorable results. Each patient must be treated individually, and the modifications of medical or surgical treatment which are most suited to the individual must be employed if the best results are to be obtained. Intelligent and effective therapy of duodenal ulcer should be based, it would seem, on knowledge of the etiologic factors and appreciation of the disturbances in normal gastroduodenal physiology which may be either the cause or result of duodenal ulcer.

ETIOLOGIC CONSIDERATIONS

It appears likely that there is no single factor which is uniformly and solely responsible for the production of duodenal ulcer. Instead, there are a number of factors which may contribute to its formation. Of prime importance is the factor of acidity. Much experimental work and numerous clinical investigations support the fact that gastric acidity constitutes a very important aspect of the etiology of duodenal ulcer.^{1, 2 and 3} Eleva-

tion of gastric acidity in the patient who has duodenal ulcer is a common clinical observation. Almost always, when we speak of the gastric acidity, we think in terms of the actual level of acid in the stomach itself. It should be remembered that an equally important site in which to consider the acidity is the duodenum, where the ulcer actually exists. It is true that under normal circumstances the duodenal hydrogen ion concentration may be directly proportional to the hydrogen ion concentration of the gastric contents,³ but under abnormal circumstances or after certain types of operations this may not be true. Thus, after creation of a satisfactorily functioning gastro-enteric anastomosis, the level of gastric acids may not be lowered materially; however, the hydrogen ion concentration in the duodenum invariably will be lower. It seems reasonable to believe that this lowering of duodenal hydrogen ion concentration is a most important factor in the healing of duodenal ulcer after this type of operation. The level of gastric acidity in the stomach is of importance after any surgical procedure, because it probably largely determines the concentration of acid to which the jejunum will be exposed at the site of anastomosis to the stomach. This in turn influences to an apparently important extent the incidence of postoperative jejunal ulceration.⁴

Closely linked with acidity in the etiology of duodenal ulcer are the natural defense mechanisms which are active in the duodenum to prevent ulceration from occurring there in every person. It is apparent at once that such factors must exist, since how else, when the digestive processes are capable of disintegrating such a wide variety of animal foods, are the stomach and upper portion of the intestinal tract not themselves digested? These defense factors which work against the aggressions of acid and other digestive agents are multiple and not completely understood. Some are inherent in the living mucosal cells themselves and some are contributed by the fluids and juices which are secreted into the duodenum. Among

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the more important of these are bile and the pancreatic juices and probably the succus entericus. Although these fluids may not be effective in neutralizing the gastric acids in the stomach,⁵ as originally suggested by Boldyreff,⁶ it seems certain that they are important in the regulation of acidity in the duodenum itself. In certain cases of duodenal ulcer, defective defense mechanisms may be of considerable importance in the development of ulceration. Relative evaluation of the factors of acid aggression and tissue defense in any given case of duodenal ulcer may be rather difficult. Methods for accurate measurement of the defense mechanisms at present are not available. In the future, when this aspect of the subject is more fully appreciated, it seems possible that treatment may become more effective.

Another factor of primary importance in the etiology of ulcer is the neurogenic factor. Although it may work through one of the previously mentioned factors, at least in part, it is of definite clinical significance in its own right. The typical dynamic, aggressive, high-strung personality which is present so often in the patient with duodenal ulcer antedates the symptoms of ulcer in almost every case, although these personal characteristics may be aggravated after the onset of pain. The frequency with which duodenal ulcer has been encountered among recently recruited flying personnel in the armed forces appears to substantiate this point of view.⁷ The exact part played by this neurogenic factor is difficult to evaluate. In some patients it is much more prominent than in others; however, in certain persons it may be more readily detected than in others. It has been thought that infection may be significant in the production of ulcer.⁸ Although the etiologic significance of foci of infection in various diseases does not receive the attention it did at one time, there is some evidence for considering infection to be an important factor in certain cases of ulcer. Local changes in the blood vessels in the duodenum, which result in lowered blood supply and thereby, perhaps, deficient nutrition to a given portion of the duodenal wall, have long been cited as possible factors in the development of ulceration. It is difficult to say how often such changes actually do occur. Disturbances in nutrition, either local or systemic, may be of significance in some cases. At other times repeated trauma, perhaps thermal as well as mechanical, may be of significance. Gastric ulcer associated with diaphragmatic hernia is an excellent example of the possible influence of direct trauma.

Among certain patients with duodenal ulcer one or two of these various etiologic factors may be

of primary importance, whereas among others these same factors may be relatively insignificant, and some entirely different abnormality may be primarily responsible for the ulcer. It seems important to keep in mind this possibility of variation in the contributing etiologic factors of duodenal ulcer because intelligent treatment should direct the main efforts against the most important causative agents in any given case. This approach to the problem of treatment prevents adoption of any stereotyped form of therapy which, although it might be effective in most cases, would fail in others in which failure might have been prevented if certain variations in treatment had been utilized.

MEDICAL OR SURGICAL TREATMENT

One of the first decisions which must be made in treating the patient with duodenal ulcer is whether medical or surgical treatment is advisable. After this main decision has been made, the details of either form of treatment may be settled. In general, it is rather widely accepted today that duodenal ulcer is primarily a medical disease. Only in the presence of certain complicating conditions is surgical treatment indicated. It seems likely, as time goes on and more is learned of such substances as urogastrone and enterogastrone,^{9 and 10} that medical management will become increasingly more effective and surgery will be necessary in a correspondingly smaller number of cases. At present it is difficult to state exactly what percentage of patients should be treated medically and what proportion should have surgical attention. This depends to a large extent on the type of condition which is encountered and the experience of the physician. In our experience during the past five years approximately 83 to 88 per cent of all patients with duodenal ulcer have received medical treatment, and the remainder have undergone operation. This does not mean that such a proportionate division of cases is the correct one for others, because we may have had more patients with complicated conditions than would be encountered by a physician in private practice.

Probably the two most important considerations in treating any patient with benign disease are the risk to life entailed by the form of treatment employed and the chance of complete symptomatic relief by the arrest of the disease. Unfortunately, these factors are difficult to determine accurately for duodenal ulcer, whether medical or surgical treatment is employed. The likelihood of death resulting from acute perforation, massive hemorrhage, or other complicating features in the group of patients treated medically is not known accurately. In addition, there are so many factors which enter into evaluation of the effectiveness of

treatment that generalizations are likely to be misleading and inaccurate. For example, "medical treatment" as outlined by one physician may be something entirely different from that suggested by another physician. In one case the patient may follow the regime outlined for a matter of weeks only, and in another case he may follow his prescribed program for a period of months or even years. One patient receiving medical treatment may stop using all tobacco and alcoholic beverages, obtain plenty of rest, take vacations, have no social or economic worries and the like, whereas in the case of another patient the reverse may be true. It is obvious, then, that the term "medical treatment" is a very general one which may vary widely in its significance from one patient and one physician to another patient and another physician. Thus, interpretation of results reported for medical treatment is extremely difficult, inasmuch as the many details so important to its success may remain unknown.

The same is probably even more true in the surgical treatment of duodenal ulcer. For example, the term "gastro-enterostomy" or "gastric resection" is very broad, almost as broad as "tumor" or "inflammation." There are many different kinds of gastro-enterostomy and gastric resection which will be followed by corresponding variations in the physiology of the stomach and duodenum. Inasmuch as the surgical treatment of duodenal ulcer is based largely on alteration in physiology of the stomach and duodenum after operation, it is obvious that the technical aspects of these operations are important. Likewise, indications followed in selecting a certain type of operation for a given patient and the plan of postoperative treatment and the accuracy with which it is followed by the patient will alter materially the results which are obtained. Thus, evaluation of results obtained after either medical or surgical treatment, as reported by various authors, is difficult to apply directly to one's own practice, when so many of the important factors which influence the result are unknown. For these reasons it is difficult to standardize indications for treatment and methods of procedure in the management of the patient who has duodenal ulcer. Furthermore, these factors have contributed largely to the widely divergent opinions which one hears expressed on this subject today.

INDICATIONS FOR SURGICAL TREATMENT

The indications for surgical treatment of duodenal ulcer might be classified as primary and secondary. In the former category are five complicating features which are more or less widely accepted as indicating the advisability of opera-

tion; namely, hemorrhage, perforation, obstruction, failure of a fair trial of good medical management and doubt as to the exact nature of the lesion.

Hemorrhage. Hemorrhage may have occurred on one or more occasions in the past or may be active at the time the patient is seen. On the basis of reports in the literature it appears that approximately twenty-five per cent of patients with duodenal ulcer have hemorrhage sooner or later. Until a few years ago the immediate treatment of the patient with active massive hemorrhage was almost always conservative in type and excellent results have been reported from this type of therapy.¹¹ More recently, however, numerous articles have appeared in which prompt operation in the case of massive hemorrhage has been favored.^{12 and 13} At present, opinion remains divided regarding treatment under these circumstances. Many favor immediate operation and others do not. It is fairly well accepted that surgery probably cannot improve to any appreciable extent, if at all, the results of medical treatment of patients with massive hemorrhage who are forty-five years of age or less. In this group the mortality rate of medical treatment is low. Among patients beyond this age, who are in a group in which the mortality rate of massive hemorrhage treated medically is reported variously to be ten to thirty per cent or higher,^{14 and 15} it appears that early operation may have a definite field of usefulness. It is our current practice to advise operation for patients of this age group if signs of bleeding cannot be brought under control within forty-eight hours after the institution of medical treatment, or if recurrence of bleeding follows the institution of medical management. Under these circumstances, a direct attack must be made on the ulcer, generally by resection but under less favorable circumstances perhaps by transduodenal approach to the ulcer, control of the bleeding vessel with suture, and some type of conservative surgical procedure for the purpose of producing healing of the ulcer, if possible. The patient who presents himself with a history of one or more severe hemorrhages always is a potential candidate for surgery and, in my opinion, generally is best treated in this manner. If operation is not performed, recurrent hemorrhages are likely to occur and perhaps be the cause of a severe acute condition arising under unfavorable circumstances. Very favorable results may be expected from operation in the prevention of subsequent bleeding.¹⁶

Perforation. Acute perforation leaves little in favor of any decision except operation at the earliest possible moment. Generally, the safest

procedure is simple closure of the defect. In case an excessive amount of indurated tissue surrounds the ulcer, excision of some of this tissue and a plastic type of closure carried out in a transverse manner may be advantageous. It should be remembered that occasionally a small carcinoma situated in or near the pylorus may perforate acutely and grossly be difficult to distinguish from a benign duodenal ulcer. Any unusual amount of induration surrounding the area of perforation or location of the lesion proximal to the duodenum always should arouse suspicion of this possibility. In the exceptional case, gastric resection or closure of the perforation associated with gastro-enterostomy may be indicated. Subacute perforation of an ulcer of the posterior wall, with erosion into the pancreas and resultant reference of pain through to the back, frequently occurs. Generally, this indicates an extremely active type of lesion which presents more than the usual difficulties attendant on medical treatment. Many perforating lesions of this type are best treated by surgery. Not only may ulcers of this type be refractive to medical treatment, but they are likely to cause hemorrhage. Even if the ulcer is healed medically, deformities incident to healing may interfere subsequently with satisfactory motor function of the stomach.

Obstruction. Obstruction caused by duodenal ulcer may be of one or two general types, the so-called inflammatory obstruction associated with an active subacute type of lesion or the sclerotic type of obstruction resulting from healing of a previously active ulcer. The inflammatory type of obstruction, which usually is a temporary disturbance, may respond satisfactorily to medical treatment. It is questionable how many bouts of obstruction of this type should be treated medically in the same patient. It is my opinion that after several such episodes operation may be necessary ultimately, and that it might as well be undertaken without further delay. Few surgeons will not agree that surgery is advisable in the presence of longstanding, sclerotic obstruction resulting from duodenal ulcer. The problem in such an instance is largely a mechanical one, because in most cases of this type the ulcer has long since ceased to be an active type of lesion. Under these circumstances little can be expected from medical treatment.

Failure of medical treatment. Failure of medical treatment to control adequately the symptoms of duodenal ulcer generally is accepted as constituting indication for operation. Here again, however, there is ample opportunity for difference of opinion. In the first place, it must be decided whether or not a well-outlined regime of treat-

ment not only has been advised but has been followed by the patient. It is an easy matter for a physician to outline an excellent program of medical treatment, but adherence to such a regime by a patient, especially under adverse social or economic conditions, may be an entirely different matter. Furthermore, the degree of relief obtained and sharp differentiation between the possible functional or organic nature of residual symptoms may be difficult. In general, if the patient has been carefully instructed in an adequate plan of treatment and has followed it to the best of his ability, and if despite this fact he continues to have definite symptoms of ulcer, it seems unlikely that results of treatment under these circumstances will be any more successful in the future than they have been in the past. This is especially true when several or more such efforts have been made.

Doubt as to the nature of lesion. In the occasional case there may be some doubt as to the exact nature of the lesion. The roentgenologist may be unable to state definitely that the ulcer is in the duodenum, and the possibility of malignancy must be considered. Most often this situation is encountered when there is an obstructing pyloric lesion, and free hydrochloric acid in the gastric contents is absent. Findings of this type always should arouse suspicion of carcinoma. If any doubt exists in this regard, operation is considered the safe procedure.

Other factors. In addition to these five main indications for surgical treatment, there are certain other factors which may suggest the advisability of surgery. The patient who lives under extremely undesirable economic or social conditions is not in a favorable position for the prolonged regime which may be necessary to heal his ulcer by medical measures. It is difficult for him to follow treatment properly and equally difficult for him to be periodically disabled because of active symptoms of ulcer. Likewise, the patient who because of lack of desire or will power does not follow the restrictions in diet imposed by a medical regime or alter his personal habits regarding smoking and drinking or eliminate nervous factors, may find difficulty in obtaining lasting relief from medical treatment. Patients in this category may require a definite alteration in gastroduodenal physiology, such as is afforded by surgery, in order to compensate for these unfavorable factors. The patient who has excessive gastric acidity with free hydrochloric acid in the gastric contents after ingestion of the ordinary test meal of perhaps seventy-five to one hundred or more clinical units, may fail to obtain relief until gastric resection is performed. Likewise,

when symptoms of ulcer have been present for many years (perhaps ten or fifteen years or more), it is doubtful if medical measures will be effective in affording permanent relief. The patient who experiences symptoms of extreme severity, in contrast to the one who has only mild symptoms, may have more difficulty in obtaining complete control of pain by the use of the usual medical measures.

Although perhaps none of these so-called relative factors in itself would constitute adequate indication for operation, when two or more are found in the same patient, surgical treatment should receive consideration. The important point to remember is that the patient must be considered as a whole, and all factors which would make for success or failure by either medical or surgical treatment should receive proper evaluation before final decision is made regarding treatment. In addition, the facilities available, experience of the surgeon and general condition of the patient must, of course, be taken into account.

CHOICE OF OPERATION

Granted that a given patient with duodenal ulcer is to be treated surgically, what type of operation should be performed? As is well known, certain surgeons favor gastric resection virtually to the exclusion of all other procedures. Other surgeons believe that certain other operative procedures, notably gastro-enterostomy, still have a definite place in the treatment of ulcer. Personally, I subscribe to the latter point of view. Few consider that local operations on the outlet of the stomach have more than the most occasional usefulness.

Much can be said in defense of gastro-enterostomy, despite the numerous condemnations which it has received during recent years. It is unfortunate, I believe, that discussions regarding the merits of gastro-enterostomy have been so one-sided during recent years. It would seem that the innumerable good results which have followed this operation in the past had been forgotten completely and that only the unsatisfactory results are remembered. Seldom does one hear of gastro-enterostomy without simultaneous reference to jejunal ulcer. The incidence of jejunal ulcer after gastro-enterostomy depends on a number of factors, but when gastro-enterostomy is performed properly and with proper indications the incidence of subsequent jejunal ulcer is not high,¹⁷ probably not more than five per cent. Any surgeon who has had an appreciable experience with gastro-enterostomy will have records of many cases in which complete relief was obtained by this procedure. It seems only fair that favor-

able as well as unfavorable results should be remembered.

In contrast, when gastric resection is referred to, one seldom hears anything but the favorable results discussed. Yet, any surgeon of experience can recall clearly, if he will, that jejunal ulceration and other undesirable results have followed gastric resection. It is not true, as current literature might lead one to think, that results after gastric resection always are favorable and that those after gastro-enterostomy always are unfavorable. In fact, jejunal ulceration has been reported by certain surgeons to follow gastric resection more often than it has followed gastro-enterostomy performed by others.^{17, 18, and 19} These variations may be due to a number of different factors, including the type and race of the patient, activity of the disease and indications for operation. Furthermore, it is well known that jejunal ulcer may occur as late as twenty years after the performance of gastro-enterostomy, and this operation has been done often enough in past years to have such instances encountered. In contrast, gastric resection for duodenal ulcer has not been employed with sufficient frequency in many places in the country to afford a similar experience with this operation during a comparable period of time. Good results reported as following gastric resection, within five years at least after the operation, would seem to have very little significance. To obtain the true picture, comparable to that obtained for gastro-enterostomy, more patients who have undergone gastric resection must be followed for a longer period.

Of prime importance in selecting an operative procedure, especially for the treatment of a benign lesion, is the risk involved by the operation. Protagonists for gastric resection in every case in which duodenal ulcer is treated surgically, seldom mention the relative operative mortality rate accompanying gastro-enterostomy and gastric resection. It would seem an indisputable fact that gastric resection cannot be performed with as low a mortality rate as that associated with gastro-enterostomy performed with the same care by the same surgeon. Experience at the Mayo Clinic during the past five years reveals an average mortality rate during this time of four per cent for resection performed for duodenal ulcer as compared with two per cent for gastro-enterostomy performed for the same condition. It seems significant to ask how many jejunal ulcers, developing after gastro-enterostomy, would compensate, so to speak, for the two additional patients out of every hundred who failed to survive the operation of gastric resection. Certain surgeons have reported a much higher mortality rate than the one

I have mentioned for gastric resection. As the surgeon's experience with gastric resection accumulates, his operative mortality rate will become lower, but I believe it should approach that of gastro-enterostomy rather closely if it is to be employed frequently in the treatment of duodenal ulcer.

Indications for gastro-enterostomy. As mentioned previously, the results which follow gastro-enterostomy performed for duodenal ulcer, as is true of those which follow any operation, will depend to a considerable extent on the indications employed in selection of the operation and the manner in which it is performed. What, then, are the indications for gastro-enterostomy? Perhaps there is no single factor which in itself would constitute an adequate indication, but of course there is always more than one factor to consider. In general, I believe that the following considerations tend to favor gastro-enterostomy: patient of Caucasian extraction, advanced age, poor general condition, patient who for any reason constitutes a "high operative risk", low gastric acidity, absence of gastritis, chronic relatively inactive lesion, single ulcer, minimal neurogenic factor, favorable personal habits on the part of the patient and technical difficulties which would make satisfactorily performed gastric resection unduly hazardous.

Indications for gastric resection. In contrast, conditions which would tend to favor gastric resection are: patient of Jewish extraction, middle-aged or younger, constituting a good surgical risk, with an extremely active lesion, history of hemorrhage, high gastric acidity, considerable gastritis, multiple ulcers, marked neurogenic factor, poor personal habits, unfavorable economic status and reasonable technical difficulties. It is seldom that the surgeon encounters a patient in whom all factors favor one form of operation as compared with the other. Generally, the picture is mixed, and sound clinical and surgical judgment must be employed in choosing the proper surgical procedure. During the past five years gastro-enterostomy and gastric resection have been performed in an almost equal number of cases at the Mayo Clinic, although during 1941 gastric resection was performed in a few more cases (55 per cent) than gastro-enterostomy (45 per cent).

Type of gastro-enterostomy. As stated before, the type of gastro-enterostomy or gastric resection performed will influence the results obtained. This seems equally true for both forms of operation. Although details of surgical technic will not be discussed here, in our experience the type of

gastro-enterostomy which is followed by the best results is performed by placing the gastro-enteric stoma neither too far proximally nor too far distally in the stomach. The stoma which is of generous size (six to eight centimeters), particularly in the enlarged stomach, is situated on the posterior wall of the stomach and runs obliquely from above downward from right to left. It is continued downward right to the greater curvature at a point opposite the incisura. The anastomosis is established posteriorly to the transverse portion of the colon and the stomach is brought through the mesocolon, generally to the left of the middle colic artery, and sutured to the mesocolon, well back from the line of gastrojejunal suture. Care should be exercised to place these sutures which secure the stomach to the mesocolon actually in the wall of the stomach at all points, and not in the gastro-colic omentum near the greater curvature. The proximal jejunal loop, which is short (eight to twelve centimeters), is attached toward the lesser gastric curvature, and the distal loop of jejunum is approximated toward the greater curvature.

Type of gastric resection. If gastric resection is performed, the posterior Polya type of operation has been found most satisfactory, and other forms of resection are employed only because of special indications. With this procedure a generous portion (two-thirds to three-fourths) of the stomach is resected so one can be certain that the major portion of the acid-bearing area has been resected. The duodenum always is severed distally to the pylorus and the ulcer is removed, unless, as in the rare case, it is situated extremely deep in the duodenum. After closure of the duodenal stump the latter is buried in the head of the pancreas. As is done in gastro-enterostomy, the stomach is sutured well below the transverse mesocolon, generally to the left of the middle colic artery. The proximal jejunal loop is short (ten to twelve centimeters) and is approximated to the lesser gastric curvature. The distal part of the jejunal loop is sutured to the greater curvature.

SUMMARY

The treatment of duodenal ulcer is primarily medical; however, features such as hemorrhage, perforation, obstruction, failure of medical management and question as to the true nature of the lesion, favor operation. Certain less definite indications for surgical treatment are also recognized. Gastro-enterostomy still retains a definite place in the surgical treatment of duodenal ulcer. Factors which influence the choice of surgical procedure and certain significant points in the

performance of gastro-enterostomy and gastric resection are discussed.

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REVIEW OF DISEASES OF THE PANCREAS*

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In reviewing the subject of pancreatic diseases, my principle object is to make us all more "pancreas conscious" when confronted with pathology in the upper abdomen. In my opinion, many of us occasionally miss a true diagnosis in the upper abdomen because we are not "on our toes," so to speak, regarding the many aspects of pancreatic pathology. Another reason is the fact that not too much has been known in the past regarding the diagnosis, symptoms and differential diagnosis of these conditions. Because the subject is a large one, a thorough review of all phases of it would be impossible in a paper such as this. Therefore, I will merely give a rather complete outline and discuss only the more recent work which has been done in the types we most frequently encounter.

1. Acute pancreatitis is divided into the following groups: acute edema of the pancreas, hemorrhagic pancreatitis, suppurative pancreatitis and gangrenous or necrotic pancreatitis. These conditions are thought by many to be different stages of the same condition. These observers feel that the pancreatitis may stop at edema or it may progress through all the various other stages.⁸ Elman¹² in a recent article concluded that acute edema of the pancreas represents a distinct clinical and pathologic entity and not merely an early stage of pancreatic necrosis. Some observers even go so far as to believe that fat necrosis can exist without the slightest involvement of the pancreatic parenchyma.

2. Chronic pancreatitis may be divided into interlobular, usually associated with lymphangitis of the pancreatic lymph vessels, and interacinar, in which the new growth of connective tissue invades the interacinar spaces, replacing the parenchyma and involving the islands of Langerhans. This type is therefore most often associated with glycosuria or true diabetes.

3. Pancreatic cysts.
4. New growths of the pancreas.
5. Pancreatic calculi.
6. Pancreatic insufficiency, probably caused by and following some of the above conditions, causing the so-called pancreaticohepatic syndrome.

At this point it may be well to review briefly the physiology of the pancreas. The pancreas has both an internal and an external secretion. The internal one is insulin, which plays such an important part in our carbohydrate metabolism and which is produced by the islands of Langerhans. The external secretion contains the following enzymes:

1. Trypsin, or pancreatic protease, which when activated by enterokinase is a powerful proteolytic enzyme. It acts in an alkaline medium and is a much more powerful proteolytic enzyme than pepsin.
 2. Amylase or diastase, a very efficient ferment for the digestion of starch, has an action similar to but much more powerful than that of ptyalin, the salivary amylase.
 3. Pancreatic lipase or steapsin, which splits the fat molecule into its constituents, fatty acids and glycerine.
 4. Maltase, which forms small amounts of glucose in the final stages of pancreatic digestion.
 5. Rennin, which has an action similar to gastric rennin, the milk curdling ferment.²
- The pancreas also contains a lipotropic hormone which is not present in the pancreatic juice, termed lipocaic by Dragstedt³ who discovered it. That such a hormone is an internal secretion of

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the pancreas depends, as clearly expressed by Dragstedt, on the recognition that the depancreatinized dog, fed on a mixed diet of protein, carbohydrate and fat is not returned to a normal state by the adequate administration of insulin and pancreatic juice, and that the remaining deficiency is corrected by the oral administration of pancreas or certain extracts of pancreas, but not of other organs.

At the risk of appearing didactic, I will briefly outline the symptoms of the various types of pancreatic pathology simply for the purpose of keeping our attention on the different pictures involved; however, I wish to emphasize that the problem is by no means as simple as this outline might lead one to believe. As a matter of fact, the diagnosis of pancreatic disorders is one of the most difficult to make in the abdomen.

SYMPTOMS OF ACUTE PANCREATITIS

The symptoms of acute pancreatitis differ somewhat with the type of condition with which one is dealing. In the mild edema, one gets a rather mild attack of epigastric pain and vomiting with epigastric tenderness or tenderness directly over the pancreas, usually a mild temperature, slight leukocytosis, and possibly a slight increase of blood amylase and diastase, lasting twenty-four to forty-eight hours. These are usually diagnosed as indigestion or mild cholecystitis.

In the more severe types, the hemorrhagic, suppurative and necrotic types, onset is sudden and the pain which is extremely intense, is located in the epigastrium. Sometimes it extends to the back or to the left flank if the tail of the pancreas is involved, causing shock and prostration. Vomiting accompanies the pain, and there is tenderness in the epigastrium. This pain and tenderness are often felt to the left of the navel and are more intense and persistent than in gall stone colic. Usually there is a temperature of 100 to 102 degrees and a leukocytosis of fifteen to twenty-five thousand. Muscular spasm develops later than in ruptured gastric ulcer, and is usually more pronounced in the epigastrium and middle of the abdomen than in acute, obstructive cholecystitis. Jaundice may appear late in a small percentage of cases, showing some obstruction of the common duct.

Comfort and Osterberg of The Mayo Clinic recently reported a series of thirty-one cases in which serum amylase was much elevated in 87 per cent, and a series of 84 cases in which the serum lipase was increased in 99 per cent. They found for normal values an upper limit of 320 units for amylase, and 1.0 to 1.5 cubic centimeters for lipase. These tests are more accurate in the

first forty-eight hours since the concentrations for both ferments tend to return to normal after this length of time, although they may remain elevated for days. Given all these findings, especially with a history of gallbladder disease, one can feel fairly safe in making a diagnosis of acute pancreatic necrosis or hemorrhage. A blood amylase test can be made by any laboratory equipped to do blood sugar tests, and this test can be completed in one hour.

Although the trend has been away from immediate operation, there is a growing realization that acute pancreatitis is a generic term which includes the classic, acute hemorrhagic or gangrenous type with acute fat necrosis, and the less serious, less acute, transient, non-hemorrhagic or interstitial type of pancreatitis, synonymous with the term pancreatic edema. A striking summary of ten cases, five of each group, was recently presented by Casberg.⁵ All were treated without operation. The five patients with acute necrotic or hemorrhagic pancreatitis died, and the five patients with edema recovered. He noted that all the patients having interstitial pancreatitis with edema entered the hospital with a past history of several similar attacks, while the patients with acute pancreatic necrosis gave no such history. He interpreted this as evidence against the supposition that acute interstitial pancreatitis is merely a mild degree of, or an early stage in the development of acute necrosis. This same inference is made by Meyer-May,⁶ who observed 27 cases of acute non-hemorrhagic pancreatitis but none of acute necrosis. This author described his experiences fully and was able to study the lesion microscopically in biopsies from nine patients who were operated upon. This author used the term "attenuated" as well as edematous pancreatitis. He made no observations on the amylase content of the blood or urine, but did note a fall in the ferment of the duodenal contents in many patients. Many had hyperglycemia and to these he gave insulin with good results.

Griessmann⁷ described 80 cases of acute pancreatitis which he observed in six years at the German clinic of Giessen. Thirty of the patients had acute edema, and 50 had acute necrosis of the pancreas. In the former group there was no mortality, whether the patients were operated upon early or late. In the group showing acute necrosis, immediate operation was followed by a mortality of 34 per cent, whereas with delayed operation on an average of eleven days after admission, the mortality fell to 13 per cent. Of the whole series 94 per cent had biliary lesions, although only 20 per cent had stones. Biliary diversion was carried out at operation in all the

cases. Many recent writers speak of the high blood amylase in acute pancreatitis, with its subsidence to normal levels in twenty-four to forty-eight hours. High urinary amylase values were observed by Smyth⁸ in experimentally produced pancreatitis. Other observers⁹ found increases of blood amylase as high as 250 times the normal amount, forty-eight hours after complete ligation of the pancreatic ducts in dogs.

In a review by Elman of the work done on this subject in 1940, he states that ferment studies of the blood, both amylase and lipase, emphasize increasingly the value of such studies in the diagnosis of pancreatic disease. He reports on the studies of Martin and Widger who presented typical amylase curves showing the fall of the high amylase concentrations with the subsidence of the symptoms. In a paper just published by Elman¹⁴ he states that any patient with severe, pronounced, abdominal pain, particularly when it is located in the epigastrium, should be suspected of having acute pancreatitis. If the blood of such patients is examined promptly for the amylase content, many cases of acute pancreatitis will be detected. One will be able either to make such a diagnosis or exclude it.

THERAPY OF ACUTE PANCREATITIS

Until the past few years we were taught that immediate operation was the treatment of choice, but the mortality was found by different observers to vary from 33 per cent (Smead, twelve cases) to 80 per cent (Eliason and North, thirteen cases). Recently a more conservative attitude has been taken in all cases where the diagnosis is reasonably certain, and the mortality has dropped considerably. Reichl reported a mortality of 45 per cent in 89 cases treated surgically, and only thirteen per cent in 31 cases treated medically.¹³ Smead in 1936 felt that early operation was not justifiable and that it did not lessen the shock or limit the extent of the necrosis. Eliason and North favor deferring operation until the acute symptoms have subsided but emphasize that accuracy of diagnosis is absolutely essential. Elman¹⁴ feels that when acute pancreatitis does not subside spontaneously in twenty-four to forty-eight hours, the necrotic type must be present. In this case, operation should be done as soon as the patient's condition is satisfactory, probably at least several days after onset. He feels the lesion must be attacked at its origin: the surgeon opens the lesser peritoneal sac and allows escape of infected or necrotic material by drainage to the outside.

Copeland and McFetridge report that prompt surgery minimizes the pancreatic destruction by relieving tension and permitting drainage of pan-

creatic juices with a resulting decrease in peritonitis. Hunt recently stated he felt prompt intervention within eight to twelve hours could halt the process in the pancreas in the acute, edematous stage. There is even a difference of opinion as to just what is to be done if a case is treated surgically. The procedures vary from a simple drainage of the lesser peritoneal cavity to a drainage of this cavity with incisions through the pancreatic capsule; sometimes only the gallbladder and common duct are drained.

As a last word in therapy, unless the diagnosis is positive, exploration should be done so that a ruptured ulcer or gallbladder will not be overlooked.

SYMPOMTS AND TREATMENT OF CHRONIC PANCREATITIS

The symptoms of chronic pancreatitis are epigastric distress, bloating and belching, epigastric tenderness, constipation or diarrhea and possibly irregular jaundice. These symptoms are also present in lesions of the biliary tract, but if the patient suffers from a sense of fullness, if the stools are large, foul and fatty, or if the patient has a glycosuria, a diagnosis of chronic pancreatitis is probably correct.

Treatment of the interacinar type, with sugar in the urine, consists of the usual medical measures for diabetes with the diet so arranged as to contain low amounts of fat and protein. Pancreatic extract is of distinct benefit in some cases. The same type of treatment is employed in the interlobular type, but in both cases surgery should be employed if there are stones or any infection in the biliary tract. Treatment of the causative pathology in the biliary tract usually relieves the glycosuria when present.

Pancreatic cysts and new growths will be passed over briefly. They are very rare. The symptoms are epigastric pain, tumor formation in this region, symptoms of indigestion and frequently jaundice. In cases of adenoma of the islet tissue, symptoms of hyperinsulinism are found. The treatment is usually surgical.

Pancreatic calculi also are rare and difficult to diagnose. The symptoms may vary from those of mild acute pancreatitis to pancreatic necrosis. An x-ray picture, especially if taken both antero-posteriorly and laterally, is a help in diagnosis. The treatment of this condition is also surgical removal.

The condition spoken of as the pancreatico-hepatic syndrome, which often follows cases of acute hemorrhagic and necrotic pancreatitis, is caused by a pancreatic insufficiency. The term is applied clinically whenever a patient exhibits

weakness, enlarged liver and frequent, fatty, bulky stools (pancreatogenous diarrhea) which show large amounts of fat and undigested protein. However, these stool symptoms are found in celiac disease in infants and in sprue in adults.

A rather large percentage of cases of long standing diabetes, especially if uncontrolled over a long period of time, are accompanied by a fatty liver. Dragstedt and his co-workers,³ deduce from a series of experiments that there are two entirely distinct types of fatty liver, one due to insulin deficiency and one due to lipocaine deficiency. The patient with a fatty liver due to poor control of diabetes tolerates large doses of insulin well, and such treatment clears the liver of fat and reduces the hyperlipemia when this is present. The case of fatty liver due to lipocaine deficiency frequently displays hypolipemia, and hypoglycemic convulsions develop with small doses of insulin. If these experimental animals succumb to the insulin, they still have the excessively fatty liver. A marked deficiency of Vitamin A is now thought by some to produce a fibrosis in the pancreas, which in turn is capable of producing a fatty liver. The liver is greatly enlarged and there is usually evidence of fatty degeneration of other organs such as the heart muscle. In these cases of fatty liver, in the presence of diabetes, the first essential is the proper control of the diabetes. If the liver does not decrease in size, and the condition of the stools does not improve, either lipocaine or whole pancreatic tissue should be tried.

In conclusion, let me repeat the purpose of this brief discussion: to make us who are engaged in the clinical practice of surgery more conscious of the pancreas when making differential diagnoses of conditions of the upper abdomen. Much experimental work is being done in this field, and it is advisable to follow closely the literature on this subject.

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HYPOTHYROIDISM AND HEART DISEASE*

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In these days of rapidly expanding knowledge of endocrinology and of degenerative diseases, it is natural that attention should still be directed toward the relationship between members of these two classes of disease. In this paper I wish to discuss our present knowledge of the relationship of hypothyroidism to heart disease. Because of the time allotted, direct reference to the literature will be minimized.

There are very good authorities who still hold widely divergent views on many aspects of the problem of myxedema heart, and as in every other field of medicine, here, too, many questions are still unsolved. We will first take up those points on which there is a general unanimity of opinion.

MYXEDEMA AND ARTERIOSCLEROSIS

The frequent association of myxedema with severe coronary and generalized arteriosclerosis has been recognized since the earliest description of the disease. This association has been so characteristic of the autopsy reports of numerous observers since 1888 that if a case of proved myxedema should fail to reveal unusual arteriosclerosis at autopsy it would be worthy of report.^{2 to 9}

In addition to marked arteriosclerosis of large and small arteries, including the coronary vessels, autopsy material has shown interstitial edema and fibrosis of the heart muscle, pleural, pericardial and peritoneal effusions and other signs usually associated with heart failure.

The etiologic relation between myxedema and arteriosclerosis is strengthened by the finding of advanced arteriosclerosis in young individuals with myxedema. Fishberg¹⁰ and Willius¹¹ have reported cases of fatal heart failure due to extreme coronary sclerosis, associated with marked general arteriosclerosis, in patients twenty-one and twenty-three years of age. One of the most striking cases was reported by Hoelzer¹² in the German literature in 1940. This case was of a cretin, thirty-two months of age, who at autopsy

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showed a most extreme degree of arteriosclerosis typical of that found in old age. The coronary arteries, as well as many others, were highly calcified, and at places nearly occluded in this patient less than three years of age.

Other cases of advanced heart disease in youth are reported by Fahr³ and Bronstein and Baratz¹³. Fahr's patient, nineteen years of age, with myxedema developed heart failure, and the latter's patient, a female cretin, six years of age, showed a tremendous cardiac enlargement. Both patients responded to thyroid therapy, so while both patients probably had heart disease the extent of coronary sclerosis could not have been great.

Experimentally, too, very important support has come for the effect of hypothyroidism on cardiovascular degeneration. Extensive arteriosclerosis has been shown to occur in thyroidec-tomized sheep, goats, dogs and rabbits in experiments reported between 1895 and 1936. In 1936, Webster and Cooke,¹⁴ experimenting on rabbits, also reported the frequent accumulation of pericardial and peritoneal effusions in association with marked degenerative changes in the myocardium, "characterized by a decrease in the number of fibers, edema and a disappearance of the perinuclear sarcoplasm." They also noted a hypercholesterinemia paralleling the degree of myxedema and an increased fluid content of the heart muscle which was 81.9 per cent in myxedematous animals as compared with 75.6 per cent in a control series of normal animals. Goldberg,³ too, noted extensive myocardial changes and the accumulation of serous effusions amounting to anasarca. He also noted passive congestion of various organs and a dilated, pale, flabby myocardium which microscopically in some animals showed a loss of cross striations.

The occurrence of abnormal blood pressures in myxedema is worthy of comment. There have been few statistical studies of the blood pressure in myxedema. Both low and high blood pressures are of frequent occurrence. Thompson et al¹⁵ in 1931 and Lerman, Clark and Means¹⁶ in 1933 reported incidences of hypertension in series of myxedema patients of 42 and 47 per cent. The big majority of patients over fifty years of age were hypertensive.

The response of blood pressure to treatment with thyroid extract is variable. There are reports of hypertension which came down to normal or improved under thyroid therapy,^{10 and 16} and instances in which the blood pressure gradually rose under treatment.^{3 and 17} Lerman, Clark and Means¹⁶ and Ohler and Abramson¹⁸ reported that in their series of cases there was a tendency for elevated blood pressures to decrease under

thyroid therapy, particularly with a lowering of the diastolic pressure. Abnormally low blood pressures tended to rise under treatment. The frequent occurrence of hypertension in a disease of hypometabolism where one would naturally expect a lowering of the blood pressure gives further support for the influence of myxedema on arterial disease.

Many authors have commented upon the frequency of high blood cholesterol values in myxedema and the probable importance of this metabolic disorder in the production of arteriosclerosis, which has received considerable experimental support. The analogy between myxedema and diabetes in which hypercholesterinemia and arterial disease are also such characteristic features has been pointed out.^{5, 6, 19 and 20} We have long accepted the importance of diabetes mellitus as a factor in the production of arteriosclerosis. The figures of Bartels and Bell²¹ would indicate that myxedema is much more frequently associated with coronary sclerosis than is diabetes. Fifteen out of 59, or 25 per cent, of their patients either had developed symptoms of coronary sclerosis, while only three out of 100 diabetic patients showed such signs (angina pectoris or myocardial infarctions). The average age of the diabetic patients was fifty-seven, six years more than that of the myxedema series.

Cardiac arrhythmias other than extrasystoles are of rare occurrence in myxedema. However, two cases of auricular fibrillation have been reported as abolished by thyroid therapy by Grant²⁰ in 1936 and Austin²⁰ in 1937. The case described by Austin of paroxysmal attacks of vertigo, faintness and collapse due to paroxysmal auricular fibrillation, makes it seem impossible that a similar mechanism may be responsible in other cases exhibiting similar spells, which are rather common in myxedema patients.

THE ELECTROCARDIOGRAM IN MYXEDEMA

Changes in the electrocardiogram of myxedematous patients are of frequent occurrence, and have been noted by many observers since Zondek³⁸ in 1918, who first described and coined the term "myxedema heart." The changes which can be reversed or improved with thyroid administration are most characteristically low voltage of all the complexes. Inverted T waves, prolonged P-R intervals and QRS duration, the latter up to 0.18 of a second,¹¹ with slurring or notching of the QRS, and left axis deviation have all been reported to have returned to normal with thyroid therapy. All authors are agreed that changes in the electrocardiogram, reversible by thyroid ther-

apy, are of very frequent occurrence in myxedema.^{29 and 33}

REVERSIBLE CARDIAC ENLARGEMENT

Zondek¹⁶ in 1918 also described as part of the manifestations of myxedema heart, cardiac enlargement and decrease in cardiac pulsations. These hearts responded to thyroid extract with shrinkage of the heart shadow on x-ray examination and more vigorous contractions under the fluoroscope. These findings have since been confirmed by numerous observers.

Fahr³ in 1932 and Lerman, Clark and Means¹⁶ in 1933 reported series of cases of myxedema followed by x-ray examinations before and after thyroid therapy. The majority of hearts were enlarged before treatment and practically all of them responded by a definite shrinkage in the heart shadow, which in some cases amounted to several centimeters in width.

More recently attention has been given to the diagnosis of pericardial effusions in cases of myxedema. Reference has already been made to the frequent occurrence of pericardial effusions along with other serous effusions in experimental myxedema. Lerman, Clark and Means¹⁶ reported that in the two cases of untreated myxedema autopsied at the Massachusetts General Hospital, 150 cubic centimeters and more than 1,000 cubic centimeters of fluid were found in the pericardial sacs.

Gordon,⁶ Freeman²⁵ and Feasby²² have proved, by tapping, the presence of pericardial effusions accounting for some of the markedly enlarged heart shadows in their myxedematous patients. Marzullo and Franco²³ reported a patient who had been tapped five times for pericardial effusion, yielding 240 to 1,600 cubic centimeters, in whom the diagnosis of myxedema was later made. Others have reported x-ray diagnoses of enormous pericardial effusions which cleared after thyroid therapy.^{24 and 25}

It is generally agreed that the cardiac enlargement in myxedema is due principally to dilatation and somewhat to hypertrophy and edema. In view of the above considerations it seems likely that a good proportion of the markedly enlarged hearts are due in part to pericardial effusions.

MYXEDEMA AND HEART FAILURE

One of the most debated points in this problem of myxedema and heart disease is the relation of myxedema to cardiac failure. Most of the dispute centers around the diagnosis of heart failure. In Fahr's³ seventeen cases reported in 1932, he found an incidence of mild heart failure in 75 per cent, and severe symptoms and signs in

30 per cent. His severe cases presented the following signs and symptoms: dyspnea, orthopnea, cyanosis, edema, ascites, engorgement of the liver, pulmonary congestion, marked cardiac enlargement and marked reduction in vital capacity. He reported six such cases which would not respond to digitalis or other measures usually successful in treating heart failure, but which did respond very satisfactorily to thyroid treatment. The first such case was reported by Zondek¹⁶ in 1918.

Other cases of heart failure responding to thyroid therapy have been reported by Duden,¹⁶ Feldman²⁶ and Golz.²⁷ While there are numerous reports of the relief of dyspnea, edema, ascites and pleural effusions sometimes associated with enlarged liver, most observers are inclined to attribute these findings to the myxedema itself rather than to a secondary heart failure. The difficulty in making this distinction is illustrated by the case of Marzullo and Franco²³ who had recurrent ascites, pleural and pericardial effusions, edema of the thighs, marked enlargement of the heart and liver and marked dyspnea. They did not believe, however, that there was any significant congestive failure.

It should be pointed out that if these signs are due to myxedema without the medium of heart failure, no one has yet elucidated the mechanism by which they are produced. All observers are in agreement, however, as would be expected, that thyroid administration may precipitate congestive failure in some cases. If such cases are not fatal, compensation usually improves on digitalis and reduction or withdrawal of the thyroid extract.^{3, 4, 7, 9, 21 and 28}

Fishberg¹⁰ and Willius¹¹ reported cases of myxedema in youths dying of heart failure not responding to digitalis, who did not receive thyroid therapy. Higgins⁵ two cases developed their fatal attacks of heart failure during long intermissions in their thyroid treatment.

ANGINA PECTORIS IN MYXEDEMA

While angina pectoris is accorded an important place in any discussion of the treatment of myxedema, its incidence in myxedema varies widely with different observers, all the way from less than one per cent to 25 or 30 per cent.^{6 and 21} Several men have reported the appearance of angina or its aggravation on thyroid treatment. Many improved with reduction in dosage. Some had a fatal outcome.^{2, 4, 6, 21, 24, 29 and 30} It is probable that the incidence of heart pain is in some proportion to the care with which such symptoms are sought in taking histories of myxedematous patients, who are naturally uncommunicative.

Escamilla¹⁷ reported a patient with myxedema

who after eleven years on thyroid extract developed angina pectoris which was relieved by reduction in the dosage. Many observers, however, have also reported the opposite response to thyroid treatment; namely the relief of cardiac pain.^{3, 6, 21, 25 and 32}

Interestingly, Beaumont and Robertson³¹ in 1939 reported a patient who had severe attacks of angina pectoris whenever the metabolic rate was less than minus twenty or whenever elevated to the neighborhood of plus or minus zero. "With either over or under dosage of thyroid there was a recurrence of his symptoms."

Zondek³² indicates that the angina, at least in some cases of hypothyroidism, differs from the usual type in that it may be much more vague and constant, and frequently associated with attacks of collapse with low blood pressure, but a slow pulse.

ACUTE CORONARY FAILURE IN MYXEDEMA

Deaths due to acute coronary failure in patients who have been treated for myxedema have been reported in fourteen instances; eleven of the patients were presumably under treatment with thyroid extract at the onset of the fatal attack. Four deaths were due to acute coronary thrombosis, and proved at autopsy.^{3, 4, 6 and 7} Three other patients showed extreme coronary and myocardial changes, but recent thromboses or localized infarctions were not found at autopsy.^{2 and 5} The other seven cases were reported either as sudden deaths or myocardial infarctions but no details or autopsy data were reported.^{6, 16, 18 and 21} Six of the fourteen deaths were sudden with little or no warning. Most of the deaths are considered to have been precipitated by the thyroid administrations. All authors are agreed that the utmost caution should be used in the administration of thyroid extract in myxedematous patients who have indications of coronary disease.

These fatal cases have been reviewed in an attempt to single out if possible those factors which might have made them more liable to sudden failure and which might therefore be contraindications to thyroid therapy. It is noted that at least three of the fatal attacks had their onset after a period of a month or more without thyroid extract.^{4 and 5} In the other cases the dosages ranged from one grain to fifteen grains daily with death occurring from three days to many months after starting treatment. Five of the fourteen patients had an average daily dose of two grains or less. In other cases the large dosage seemed to be responsible for the speedy failure of the patient.

Electrocardiographic and x-ray studies of the patients gave no prognostic help. Elevated blood

pressure occurred frequently in the series, but it is such a common finding in myxedematous patients who respond well to thyroid treatment that it can hardly be considered significant.

The difficulty in diagnosing heart failure in myxedema has already been mentioned. Because many cases of failure and most symptoms of failure seem to respond to thyroid therapy, the presence of this finding should hardly contraindicate treatment. Many observers, however, point out that the onset or aggravation of decompensation after starting thyroid treatment is a very grave sign.

A very similar situation exists in regard to the significance of heart pain. This, too, is frequently relieved by small doses of thyroid extract. However, the onset of angina or its aggravation by thyroid administrations should be taken as a strong indication to decrease the dosage or omit it entirely for the time being.

SUMMARY AND CONCLUSIONS

In summarizing we can say there is overwhelming evidence from many sides indicating that the myxedematous state accelerates the development of arteriosclerosis, both coronary and general. Myxedema produces profound reversible changes in the electrocardiogram, and frequently causes cardiac enlargement and decrease in cardiac pulsation, which can be corrected by thyroid extract. It also causes edema, serous cavity effusions, marked myocardial changes aside from those dependent on sclerosis and many symptoms and signs usually indicative of heart failure, all of which may clear on thyroid therapy.

Thyroid administration may cause rapid relief or aggravation of decompensation or heart pain. It has apparently precipitated death in at least eleven reported cases. It should therefore be used with caution in any patient with myxedema. Onset or aggravation of decompensation or angina should serve as a warning to reduce or discontinue the dose.

This dual potentiality of thyroid extract in myxedema should be emphasized. It may accomplish much for the heart by clearing up the reversible harmful effects of myxedema, or it may precipitate decompensation, pain or infarction by increasing the work required of a heart handicapped by coronary sclerosis. If heart failure in a patient with myxedema does not respond to the usual measures, it may respond to thyroid extract, cautiously administered.

We can feel sure that thyroid administration can retard arteriosclerotic degeneration in patients with myxedema. Might it also delay arteriosclerosis in patients with less severe degrees of

hypothyroidism, even before the onset of hypercholesterinemia?

Discussion

Dr. Samuel P. Leinbach, Belmond: Dr. Smith is to be complimented on the completeness with which he has covered the topic of hypothyroidism and heart disease. The purpose of this discussion, therefore, will be to re-emphasize some of the salient facts presented by Dr. Smith.

Hypothyroid heart disease is not a common condition. Authors differ as to its frequency. Their figures vary from an incidence of 20 to 83 per cent showing cardiac manifestations. In hypothyroid heart disease, as Dr. Smith has pointed out, the following pathologic changes act to produce the cardiac picture. Frequently a myocarditis is present due to edema and fibrosis of the muscle fibers of the heart, which in turn, due to loss of tonus, may give rise to dilatation of the heart with or without associated pericardial effusion. Frequently the coronary arteries show sclerotic changes which may be accompanied by generalized arteriosclerosis. In order to treat the patient with hypothyroid heart disease it is not only important to consider his general physical status but also the type and degree of pathologic changes in his heart.

Brenner and Christian, as well as many other investigators, state that thyroid therapy must be administered with a great degree of caution in these patients. If the pathologic changes in the heart are far advanced, it is Christian's opinion that the hypometabolism as a part of hypothyroidism is a protective influence on the heart, and if that patient should be subjected to thyroid medication his heart might be unable to withstand the increased circulatory burden resulting from the increase in metabolic rate. That individual then might suffer from rapid congestive heart failure or fall prey to coronary occlusion.

Fortunately, all hearts in myxedematous heart disease have not advanced to this degree of pathologic change when first seen. As Dr. Smith has stated, in these patients the response to thyroid extract cautiously administered under close observation may be most remarkable. It is in this group of patients that thyroid extract seems to have an almost specific action on the heart. This result is most marked on the heart muscle and the pericardial effusion, which is probably due to a clearing up of the edema of the muscle fibers together with an absorption of the pericardial fluid. According to Hallock, proof that thyroid administration has an almost specific action in this respect is the fact that when thyroid medication is discontinued the heart invariably returns to an increased size in spite of the maintenance of a strict cardiac regime otherwise.

Due to increased circulatory efficiency, anginal pains at times disappear in these patients under thyroid medication. Some patients, however, have an increase of their pain due undoubtedly to the fact that sclerotic changes in the coronary arteries are so advanced that these arteries are unable to

supply the heart muscles with enough blood to carry on its increased activity. These are the patients who become more vulnerable to coronary occlusion as the result of thyroid extract.

In all myxedematous heart patients it is important to use thyroid extract, providing of course that it can be safely used. One must bear in mind, however, that the usual cardiac regime for care of heart patients should be followed, as well as the proper use of the indicated cardiac drugs.

One final important fact should be mentioned. Most myxedematous patients are anemic. This anemia, as aptly described by Christian, requires these patients to have a greater cardiac output for a given metabolic activity to compensate for the lack of oxygen-carrying capacity of the blood. The anemia in these patients is improved by the giving of thyroid extract in itself, but more potent measures in addition are advisable. The anti-anemic drugs should be given faithfully to all these patients showing anemia, and in the more severe anemias it is advisable to administer, in addition, whole blood.

Dr. E. Marsh Williams, Oskaloosa: This subject is a controversial one in most all of its divisions. It is necessary in the discussion of a scientific subject for us to have a clear and common understanding of the terminologies used or we will be in a state of confusion. Such terms in this discussion are arteriosclerosis, hypothyroidism, hypotension, myxedema, edema, atheromatous degeneration, colloidal osmotic pressure of blood plasma, anoxemia and calcification. The two terms of which we should have a clear and common etiologic understanding are hypothyroidism and myxedema. I think we all agree that the hypothyroid state is an underactive thyroid gland. It may be from zero to complete hibernation of metabolic activities, which occurs around minus 40 to minus 50 basal metabolism. The so-called myxedema occurs at about minus 20 to minus 25 basal metabolism. It is associated with cardiovascular degeneration, is probably endocrine in nature and may be associated with other glandular products from the pituitary gland, the adrenal glands and the endothelium of the cardiovascular system.

It is difficult to conceive that all of this complex mechanism and hormone production could possibly be in complete adjustment all through life. Dr. McPheeters of the University of Minnesota presents a clear review of the embryology and degenerative processes in the life history of veins and arteries, which gives us a good understanding of what is taking place in the veins and heart. In fetal life all veins have valves at three and one-half months, which are similar to the heart valves. These are complete at five months and then degeneration begins in all but the veins of the extremities and the heart. This degeneration may go on into adult life and discontinue or it may stop at any time. It results in an atheromatous condition of the vascular system more apparent in some parts than in others and at various ages. We should not use the obsolete term arteriosclerosis. These changes in

the vascular system with alterations in blood plasma products caused by slowing of the blood stream, lowered pressure, variations in the basal metabolism, hypotension and changing osmotic pressures, we choose to call hypothyroidism. This portrays edema, anoxemia, so-called myxedema, angina pectoris, mucine edema (myxedema) with so-called hyalin degeneration of muscle and elastic connective tissues, and increased weight from tissue infiltration of various blood plasma products in various stages of dehydration. These various forms of degeneration may occur anywhere in the vascular system walls, whether in the heart, veins or arteries.

Dr. Paul White speaks of the so-called myxedema heart as a misnomer, rare and obsolete, which should be discarded. This so-called myxedema heart is really a stage in the vascular degeneration reached at minus 20 to minus 25 basal metabolism.

It is obvious that thyroid extract is the medicine indicated as a substitute product of medical therapy. If other products cause hypertension, such as hormones working with the thyroid hormones, it should be determined before instituting medication. If there is arteriosclerosis of the coronary arteries producing anoxemia followed by angina pectoris (which, by the way, may be the result from many conditions or diseases causing a heart anoxemia), thyroid extract should be given in small doses of one-fourth to one-half of a grain daily. The patient should be watched closely since this will increase the anoxemia and hence produce angina pectoris as it increases the oxygen requirements of the heart.

In conclusion I wish to say there is much presumptive evidence that the relation of the so-called myxedema heart is rare and is a late stage of hypothyroid inactivity. The blood tension changes are endocrine in character and may be linked with the pituitary and adrenal glands.

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CLINICAL PATHOLOGIC CONFERENCE*

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This conference will be presented with the help of some of my colleagues of the Iowa Clinical Pathological Society. I shall ask them to pass out some mimeographed papers, and then I shall call for a diagnosis from the floor and show some slides and other pertinent material which are presented in these cases and ask for your diagnoses and comments. Then we shall have the pathologist who presented the case discuss the important findings.

CASE REPORT I

Chief Complaint: The patient, a white woman, fifty years of age, was admitted to the hospital on March 10, 1940, with complaints of "cramps in the lower bowel and blood in the urine."

Family History: Unimportant.

Past History: The patient had never had a serious illness, accident or operation. Her menses had been irregular the last year and she had had other symptoms indicating the menopause.

Present Illness: Early on the morning of admission (2:00 a. m.), the patient awoke because of cramps in her bowels. She took an enema

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without benefit and then applied an ice bag, but in spite of this the pains became worse and seemed like labor pains. She also noted bright blood and blood clots in her urine. Before applying an ice bag, she had applied heat, which made the pain worse.

Physical Examination: The patient's pulse was 90; the respirations 18 per minute; the temperature 99.2 degrees; and the blood pressure 145/85. The general examination showed a middle-aged, nervous, white woman. The general examination disclosed nothing of importance, but locally there was definite costovertebral tenderness on the right side and it was thought that the lower pole of the kidney could be felt. The bleeding had its exit from the urethra. The uterus was atrophic and the adnexa were negative to palpation.

Laboratory Examination: A catheterized specimen of urine showed gross hemorrhage with a strong albumin reaction. The blood examination revealed 10,000 white blood cells, 3,380,000 red blood cells, and hemoglobin, 78 per cent Salhi.

What are your suggestions? Does anyone have a diagnosis which he wants to offer at this time?

Member: Cystitis.

Member: Pyelitis.

Member: Tumor of the right kidney.

Member: Tuberculosis.

Member: Calculus.

Dr. Morgan: Dr. McNamara, will you come up here? This first slide shows the x-ray examination which was done after the patient entered the hospital. It exhibits the pathologic findings at the time of the pyelogram. There is a large defect in the lower pole of the kidney. Dr. McNamara will demonstrate the specimen and the findings.

Dr. McNamara: I think you can all see the specimen, which is one-half of the kidney. You will see down at the lower pole the red mass which is the hemorrhage, but notice this light area in the pelvis which is a definite papillary carcinoma of the renal pelvis.

The history was somewhat unusual because it started with cramp-like pain, which the patient referred to the intestine, but there can be a very definite pain like renal colic in carcinoma of the kidney because blood clots in the pelvis and then is passed through the ureter. That causes the renal colic. As a rule the hematuria is painless.

I was surprised that some one thought first of cystitis and pyelitis. The first thing of which you should have thought in a patient with hematuria is a tumor and, of course, usually a malignant tumor of the kidney, although it might be in the urinary bladder or in males in the prostate gland; but hematuria, you must realize, means cancer of the

kidney until proved otherwise. That is an axiom from which you cannot escape. The white blood count, of course, was indefinite, but you might have had a white count of 14,000 because there is a leukocytosis in some kidney tumors. In fact, a kidney tumor can imitate practically any other disease; fever, leukocytosis, sweating, loss of strength and loss of weight are all common symptoms. Sometimes, of course, spontaneous fractures are the first signs of these tumors.

The question arises as to the treatment of this particular tumor. Medical men should be interested in this even if it is primarily a surgical problem. Was the treatment correct? To a certain extent, yes. They removed the kidney and they removed the pelvis, but the job was not done completely even then. You must remove the entire ureter when you have papillary adenocarcinomas of the renal pelvis because they frequently cause implants along the ureter or in the urinary bladder, and unless the entire ureter is removed there is likely to be a recurrence.

These tumors are supposed to be rare, but the rare feature is a pathologist who will look for them. We have had two of this particular type of tumor in recent years, whereas about eight years ago someone reported in the *Journal of Urology* that there had been about thirty-five cases in the literature up to that time. We have had two of them in our little hospital, so they are not rare but you must look for them to find them.

Histologically these tumors may appear benign, but we know from past experience that practically all of them are definitely malignant and every one of them, regardless of their histologic appearance, should be treated as cancer because sooner or later they do become malignant.

Dr. Morgan: Thank you, Dr. McNamara. The important point in this case is that there still is a strong tendency on the part of many individuals to treat bleeding in the urinary tract as a common ailment which may respond to medical treatment. The lesson is obvious. We need to conduct a thorough investigation; we must believe these conditions are carcinoma or cancer until they are proved to be something else, just as bleeding from the lungs indicates tuberculosis until it is proved to be from some other cause.

CASE REPORT II

Present Illness: A white male, laborer, forty-six years of age, was admitted to the hospital November 4, 1940, because of dyspnea, swelling of the limbs and abdomen, weakness, pallor and diffuse pain in the legs.

Past Medical History: In 1927, thirteen years

previously, this patient had had a gastro-enterostomy, which gave relief from duodenal ulcer symptoms for about six years. In 1934 intermittent periods of gastric distress returned. In 1939 the patient developed a persistent diarrhea. He lost thirty-five pounds within a year and became unable to work because of weakness. There was marked hunger even after eating. In 1940 his weight increased; he was unable to bend over, yet he became very weak and had to remain in bed. Dyspnea and orthopnea were marked several days before admittance to the hospital.

Family History: Irrelevant.

Physical Examination: On admission the patient appeared pale and was orthopneic. There was marked bilateral pitting edema of the feet, legs, thighs, scrotum, some anasarca and bilateral hydrothorax. The mucosae were pale and dry. The skin was atrophic and shiny. This appearance suggested starvation in spite of the fact that he had eaten large quantities of food daily until shortly before his admission to the hospital. He was clear mentally. The neurologic examination was negative. The heart sounds were regular, feeble and faint unless the patient sat forward and then they appeared normal. The pulse was 126 to 136 per minute, the temperature 96 to 97.6 degrees, and the respirations were 28 to 36 per minute.

Laboratory Findings: The red blood count was 3,440,000; the white count was 6,100; the hemoglobin was 7.8 grams (52 per cent); and the differential count was negative. There were 410 cubic centimeters of urine in twenty-four hours; specific gravity was 1.028; there was a trace of albumin, but otherwise it was normal. The sedimentation rate was 96 millimeters in one hour (Westergren tube). The plasma protein was 3.88 to 4.1 per cent. The hematocrit, 60 per cent.

Fluid was withdrawn from both pleural spaces. It was light straw colored and had a specific gravity of 1.008. Paracentesis of the abdomen revealed the same type of fluid. The patient died suddenly after aspiration of fluid.

Dr. Lamb, will you help me in this case and come to the platform now? In the meantime who has a diagnosis to offer?

Member: Gastrocolic fistula.

Member: Nephrosis.

Member: Beriberi contact.

Member: Pancreatic disease.

Member: Malignancy in the peritoneum.

Dr. Lamb: The first three diagnoses which were suggested indicate that the case was rather clearly stated. The first three, you remember, were gastrocolic fistula, wet beriberi and nephrosis. Those were the three conditions which we

considered in this case. The patient was in the hospital only a few days before death, and there is one element in the physical examination which should have been included in the resumé; namely, that there were many grossly undigested particles of food in the stool.

At autopsy the pale, emaciated character of the body with abdominal distention and peripheral edema, was striking. The heart weighed 210 grams, the liver, 1,470 grams, and the two kidneys together, 240 grams. A large gastrojejunocolic fistula was found. The abdomen contained approximately eight liters of fluid and there was a bilateral hydrothorax of about 3.5 liters on each side. It was estimated that the peripheral edema would amount to twenty pounds, so that a total of about fifty pounds, or nearly one-third of the body weight in this case, was free and extravascular fluid.

We are dealing here, of course, with a case of hypoproteinemia. That can be seen from the plasma protein findings which ranged from 3.88 to 4.1 grams per hundred cubic centimeters of blood. The osmotic pressure of the plasma protein is the antagonist of the intracapillary blood pressure. As the plasma protein diminishes in arithmetic ratio, the osmotic pressure falls in geometric ratio. The plasma albumin is about twice as effective as plasma globulin, gram for gram, in osmosis, that is, in retaining blood within the capillaries. We have here, then, a striking example of the influence of hypoproteinemia as a cause of edema and anasarca.

Dr. Morgan: The next case is one for which we do not have any autopsy, for the reason that this patient is still alive.

CASE REPORT III

Admission Complaint: A white female, fifty-seven years of age, was first seen on January 3, 1938. This patient was previously seen by a physician in Chicago, a member of the University Clinic there, for a fracture of the right humerus unassociated with trauma. X-rays revealed a pathologic fracture which healed readily under x-ray therapy. The patient stated she had noted a tumor mass in her left breast for a period of ten years before the fracture. It had gradually increased in size. She had not consulted a physician during this period.

Past Medical History: Non-essential.

X-ray Examination: X-rays of other bones were negative for pathologic change. X-ray treatment to the arm was instituted first in January, 1938. Since that time the patient has had multiple x-ray treatments, but has had no recurrence of trouble in the right humerus. Metas-

tatic areas have been found in the skull, spine, ribs, pelvis, both femora, both tibiae, in the forearm and in the hand. Soft tissue tumors have appeared in the groins, the axillae and in a few other cutaneous areas. The spleen has never been enlarged. The patient worked until October, 1941. Since this report was made she has suffered a pathologic fracture of the tibia.

Laboratory Examination: The blood examination on July 5, 1941, revealed 3,760,000 red blood cells, 11,700 white blood cells, hemoglobin 11.0 grams, and a differential count of neutrophils 75, lymphocytes 20 and monocytes five. On December 23, 1941, the blood count was 2,530,000 red blood cells, 8,400 white blood cells, and hemoglobin 9.0 grams. The differential count was neutrophils 56, lymphocytes nineteen, monocytes fourteen, basophil one and a left shift of 20 per cent. Blood calcium on September 5, 1941, showed fourteen milligrams per 100 cubic centimeters and inorganic phosphorus showed two milligrams per 100 cubic centimeters of blood. Is there anyone who wants to offer a diagnosis?

Member: Metastatic carcinoma of the bones.

Member: Multiple myeloma.

Member: Parathyroid tumor.

Dr. Morgan: This slide shows the original lesion as it occurred some time after therapy had been instituted and with almost complete restitution of the bone so that she has had no difficulty in this arm; in fact, it has seemed to be immune from further damage since this particular time.

The next slide shows the lesion which appears in the skull. This was taken some time ago. She now shows many more than she did at that time. There are none in the jaw at the present time.

This slide shows the type of thing which has occurred in the pelvis. This has been present to my knowledge for a period of two years and the patient walked on it during that time until October, 1941. How she kept from having a fracture there I do not know. The fracture in the tibia occurred spontaneously while she was in bed. There are other areas all through the spine, through the pubic bones and multiple areas in the ribs.

We had a biopsy made of the cutaneous nodules. These nodules had the peculiar faculty of coming up and disappearing spontaneously or with a very small amount of x-ray therapy. The patient has had so much therapy for these different areas that we are almost afraid even to take an x-ray picture any more, but the tissue shows a multiple myelomatous type of lesion. It was a solitary lesion at the start. X-rays did not reveal any other lesions originally. Multiple myeloma usually does not start as a soft tissue tumor. Presum-

ably we can say this mass, which is still present in the left breast, represented a primary tumor and that the tumor in the arm was a metastasis as are all of the other tumors. Does anyone have comment which he wishes to make here?

Dr. Lamb: It is rather unusual to have two cases appear on the program just by chance in which the blood protein findings are polar opposites. The last case was one of hypoproteinemia. Had an examination been made of the blood plasma in this case, it would have shown a decided increase in the amount of plasma protein and particularly in regard to the amount of globulin rather than albumin fraction. In connection with the hyperproteinemia there is also a spontaneous agglutination of red cells and a striking increase in the sedimentation rate.

We have recently seen a patient in whom the sedimentation rate was 140 millimeters in the Westergren tube in five minutes. The spontaneous agglutination of red cells may seriously interfere with the red cell count, so that unless a great deal of care and dexterity is used it is almost impossible to count the red cells.

A third diagnostic point is indicated here, and that is the hypercalcemia due to mobilization of calcium by the tumor growth. If one keeps in mind this triad of laboratory findings, namely, hyperproteinemia, rapid sedimentation rate and spontaneous agglutination of erythrocytes, it should make the diagnosis of multiple myeloma easier and more certain.

Dr. McNamara: Was that a proved case of multiple myeloma?

Dr. Morgan: We have a biopsy which shows it definitely.

Dr. McNamara: How do you explain the absence of pain?

Dr. Morgan: We do not know. There are several unusual conditions in this case. We have tried repeatedly to find stones in the urine but we have never been able to get them. We have not had a biopsy of the breast tumor, but we have had other biopsies.

The last case we will present very briefly. It is not of great diagnostic importance but it does call to attention a lesion which has some rather interesting legal angles.

CASE REPORT IV

This individual was an aviator who was prominent in our community. He entered with an admission diagnosis of unconsciousness. He had a history of repeated sudden, severe headaches over a long period of time. These headaches were so severe at times that he would take his plane up to a high altitude and take a power dive for several

thousand feet, which he seemed to think relieved his headache. He was in the hospital for a period of several weeks. He had three distinct periods of remission, and finally at the time of death we found, as you have probably already surmised, a ruptured cerebral aneurysm in the circle of Willis. This had broken at the time of the first onset, and on other occasions during the course in the hospital, with the final hemorrhage occurring about twelve hours before his death.

There was massive destruction in the brain at the time of autopsy, secondary to the hemorrhage there. The medicolegal angle of this is that when a hemorrhage occurs, as they often do following a slight trauma in a young individual, a typical symptom of a cerebral accident is apparent and complications may arise with the compensation commission or some other organization. Whenever a hemorrhage occurs in a young individual the possibility of a ruptured cerebral aneurysm should be considered, and a very careful search must be made to rule out the presence of such an aneurysm before the hemorrhage can be attributed to the trauma, which in most of these cases is very slight.

I know of one similar case, a young man about forty years of age, who had a hemorrhage from a slight blow on the head. He tried to make a lawsuit out of that particular case on the basis of hemorrhage following the trauma, until it was discovered on careful examination of the brain that he had an aneurysm; this, of course, is on a congenital basis and not on a traumatic basis, and the litigation was dropped.

PEDIATRICS: PAST AND PRESENT*

MARTIN D. OTT, M.D., Davenport

I have chosen this subject for two reasons; first, because we all like to reminisce; and second, our discussion may help us in evaluating the future of pediatrics.

Let us go back to the year 1920. This is a convenient date and chosen by me as the time when I became thoroughly introduced to the specialty. Pediatrics at that time was in its adolescence. It was then a relatively new specialty and there were only a few pediatricians, even in the larger centers. The great increase came in the booming twenties.

Let us hastily review the status of pediatrics at that time. First, let us consider infant feeding. The average medical student of that day classed infant feeding with dermatology and other sub-

jects too deep to fathom. The percentage method of feeding described in the textbooks seemed to the student as formidable as a problem in calculus. Fortunately for the writer, the simple dilution method was used in the midwest, but even this seemed incomprehensible to most of the students. This was due to inadequate methods of teaching in the medical schools. The average general practitioner of that day was glad to have the mother experiment with several of the proprietary foods in the hope that she would find something satisfactory and not bother him. Because of this condition, it is not surprising that the pediatricians with their knowledge of simple scientific principles of pediatrics could work wonders with many nutritional wrecks who came to them. Yet even the pediatricians' knowledge was limited. We used simple milk dilutions beginning with one-third milk mixtures and slowly increased them. There was a great fear of strong milk mixtures and formulas were increased with fear.

The popular sugars were dextrimaltose and lactose. We had not heard of Karo, which was shortly after popularized by Marriott along with lactic acid milk. For those who did not do well on simple milk mixtures we had only a few alternatives. One of the most popular was a butter-milk mixture made with flour and cane sugar, another was Keller's malt soup mixture. For those who did not do well on these we fell back on protein milk, which was used in large quantities. A great contribution was made by Marriott in his lactic milk. It demonstrated that milk could be given in an undiluted form to even the most delicate infants. This gave us food of high caloric value, and I feel it was one of the greatest contributions ever made to infant feeding, since it completely exploded the theory of Milchnahr-schaden.

We created a sensation with the laity by giving solid foods at the unheard of age of six months. The public in those days was not vitamin conscious. Cod liver oil was only beginning to be popularized. It was not the most palatable preparation in those days and there was considerable sales resistance on the part of the parents. Rickets in varying degrees was common, as was tetany. Orange juice was used but not as universally as at present; therefore, we encountered scurvy.

As stated, tetany was not at all uncommon in the late winter and spring months, but this was an unknown syndrome to the general practitioner. Therefore, the pediatrician could, through the use of calcium chloride, play a dramatic rôle. Neither did the general practitioner have any conception

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of pylorospasm and pyloric stenosis, and again the pediatrician was able to make a lasting reputation for himself. It was about this time that Sauer introduced his thick cereal feeding which has been so helpful in pylorospasm. Pediatricians, because they recognized the condition, could call in surgical assistance in pyloric stenosis. Intussusception also was seldom recognized except by the pediatricians.

Enteritis, which was much more common in those days and I believe more severe, was a constant source of concern to us. One mainstay was protein milk. We used parenteral fluids but not as frequently or as scientifically as at present. Otitis media was seldom recognized by the general practitioner because he never carried an ooscope. We were able to relieve many case of so-called teething by the use of the paracentesis knife. The urine of infants, particularly female, was never examined by anyone except the pediatrician. This was due to the supposed difficulty in collecting specimens. Incidentally, pyelitis seemed to be more frequently encountered then than now, and because of the inadequate methods of treatment a case of pyelitis was protracted and a source of considerable revenue to the pediatrician. Contagious diseases were somewhat more prevalent since we had no immunization procedures except smallpox vaccination. Toxin-antitoxin was just being introduced. The sequelae of the exanthems were numerous and often severe.

Time prevents a further discussion of this phase of the subject. In spite of our inadequate knowledge, results were dramatic and the reputations of pediatricians were made not because of their profound knowledge but because of the great lack of knowledge of infant feeding and children's diseases among their medical colleagues.

Pediatrics as such was barely taught in those days, and certainly was inadequately presented. It was only through the employment of full-time teachers of pediatrics that this condition was slowly rectified. Interest in the subject became widespread and during the booming twenties pediatricians multiplied like rabbits. Furthermore, improved teaching and clinical facilities have produced a general practitioner with a fair knowledge of pediatrics; in fact many of the younger men are quite competent to care for the average pediatric problems. No longer are we called in consultation on cases of pyloric stenosis and intussusception. They diagnose them and perform the operation, and with the passing of the years fewer and fewer cases are referred to the pediatricians.

Infant feeding has been simplified through the addition of evaporated and powdered milks so

that the feeding of the average child is no longer a problem. Nutritional problems also have been simplified by the introduction of the various vitamins.

We have not only educated the physicians but we have been most zealous in educating the public. This, I believe you will agree, has been carried too far. The pediatrician is supposed to be a public spirited citizen. He is expected to donate his services in all immunization campaigns, to examine babies at beauty contests, at county and state fairs; all this for the good of the cause. The public is surprised if he is not eager to do it. Probably lay education has been of some value to us as pediatricians in that it has stimulated interest in the better care of children. It has also encouraged parents to bring their children to us, but one cannot help yearning for the good old days when the public was just a little less educated.

The introduction of the sulfonamide drugs during the past few years has revolutionized the practice of pediatrics as well as general medicine. The treatment of pneumonia, for example, was formerly a difficult task. The patient required careful watching for complications; his fluid balance and nutrition had to be maintained. Now we seldom have complications, and there are no nutritional problems because the patient is acutely ill for so short a time. We formerly had to watch the patient carefully for toxic effects of the sulfonamide drugs. Now there are few toxic effects. How many ears do we open? How many suppurated cervical glands do we find? One may well ask, whither are we bound? It would seem that theoretically, at least, pediatrics as a specialty has passed its peak. There are some men who feel that in twenty-five years there will no longer be a specialty of pediatrics. Who knows? These changes may not profoundly affect us at our age. It is my belief, however, that teachers in medical schools who have in their charge the shaping of the future of young students should hesitate in encouraging young men to enter the private practice of pediatrics. We shall probably always need some pediatricians, but certainly in decreasing numbers.

MEETING OF CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS CANCELED

Officers of the Central Association of Obstetricians and Gynecologists have deemed it advisable to cancel the meeting of the organization originally scheduled to be held in Des Moines, October 22, 23 and 24, 1942. When it is possible to resume normal activities, Des Moines will be host to the Association.

RETINITIS PIGMENTOSA*

JESSE H. MCNAMEE, M.D., Des Moines

A resumé of available facts and theories of retinitis pigmentosa leads one to the conclusion that, as in many other afflictions of the human body, there are many problems which only time and further detailed research can unfold.

Hemeralopia, night blindness, with a tendency for the affliction to run in families, has been described in ophthalmologic dissertations for a good many years. It was reported as long ago as 1774 by Overgun and appeared again in literature in 1828 by Pye. The coming of the ophthalmoscope in 1851, however, afforded the first opportunity to divide cases between those with retinal changes and those without visible pathologic findings.

In 1857 Donders described a pathologic fundus, which he named retinitis pigmentosa.¹ The clinical picture has continued to be known by this name through the years, but many facts and theories lead one to suggest that a more correct nomenclature would be "pigmentary degeneration of the retina". There is no absolute evidence that the disease is an inflammatory process; it seems to be a combined hereditary, vasomotor and neuro-epithelial degenerative process, the exact nature of which has not yet been unfurled.

The disease may be defined in a general way as a slowly progressing degeneration or destruction of the retinal neuro-epithelium, the rods and cones, with a migration of pigment granules into the vacant retinal spaces and a connective tissue hyperplasia. The disease is usually bilateral. It frequently develops at an early age, producing certain characteristic pathologic changes in the structure of the eyeball which result in a progressive loss of visual acuity and often blindness.

The classical symptoms and physical findings which must be present to establish an unquestionable diagnosis are:

1. Night blindness, which is not necessarily an early complaint in the onset of the disease.

2. Disturbances of the visual field, usually a concentric contracture or a ring scotoma. The fields as well as the fundus are undergoing continuous change as the disease advances, and therefore may present many varied types in the same case through the years. One rather persistent finding is a relatively good central visual acuity in the very late stages of the disease.

3. Visible pigment deposits in the substance of the retina, which may form the characteristic "bone cell" structural arrangement and which early in the course appear first in the equatorial re-

gion of the fundus. The few good collected and recorded microscopic specimens of the disease seem to indicate clearly why this pigment is deposited in the way it appears macroscopically. These conditions will be discussed later in this article.

There are a few less familiar subjective and objective findings which may aid in making a diagnosis in some of the cases:

1. A preference for artificial light.

2. A persistence of images. These symptoms are present more frequently in the late stages of the disease.

3. There is seen frequently a zone of greyish infiltration inside the main pigment zone and occasionally a fine layer of clouded vitreous anterior to the retina.

The school of thought favoring the vasomotor theory as the underlying factor in the production of the pathology enlarges upon the physical findings of hypotony and reduced temperature, both of which are frequently found in these cases. These workers believe there is a cerebral disturbance, similar to that in the eye, which only time and adequate specimens may prove or disprove. Some investigators link retinitis pigmentosa with the congenital syndromes of the Laurence-Moon-Biedl type. The pathology in the latter condition begins in fetal life and in that way accounts for the mental and skeletal defects as well as the similar defects in the eye itself.

The pathologic picture is becoming more clarified as data on microscopic specimens accumulate. Verhoeff⁵ explains the bone cell arrangement of the pigment by the deposits along the capillaries, or rather along the hyaline connective strands which were formerly capillaries. The external limiting membrane must be destroyed before the pigment can migrate to the inner layers of the retina. Disagreement will prevail among investigators until our microscopic data contain specimens of all stages of the disease. Several pathologic variations may arise due to a difference in hereditary factors alone. The dominant, recessive and sex-linked recessive traits may produce three varieties of pathologic pictures. Whether the choriocapillaris is involved, as some far advanced cases reveal, or whether the choroid is exempt is a question for discussion.⁹ Levy-Wolff's⁶ studies of the vascular and nutritional supply place the center of disturbing pathology in the capillaries of the choroid and retina. She proposes a change in name for the disease to sclerosis pigmentosa chorioretinalis. It is well agreed that the neuro-epithelium of the retina is the site of the degeneration. The rods and cones, and more

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

especially the rods, are susceptible to destruction. It is further agreed that there is a migration of pigment granules into the areas of disintegrating neuro-epithelium assuming a pattern of the minute vascular network which also is destroyed in the pathologic process. The origin of this pigment is open for discussion. Those investigators who include the choroid in the scope of the disease feel that the pigment migrates from that layer. Others, however, feel that a generation of excess pigment from the retinal pigment layer is the source. The disease is not inflammatory since there are no plasma or round cell infiltrations or exudates and no vessel engorgements to be found.⁵ Some patients show marked atrophy of the optic nerve and others very little change. The clinical waxy color of the optic nerve may be explained on the basis of gliosis of the structure. The central retinal vessels may be distinctly altered or may show very little deviation from normal. The smaller vessels show thickening of the adventitia.⁵

There is a wide diversity of opinion as to the contributing factors in the etiology of the disease. That it has hereditary connections cannot be denied. There are three genetic traits whereby the disease may be transmitted. It may be inherited as a dominant characteristic, affecting male and females equally; as a recessive trait which also affects both sexes alike; or as a sex-linked recessive trait whereby only males inherit the disease. This accounts for the relative three to two incidence of males to females.³ The recessive group contains those cases of the Laurence-Moon-Biedl syndrome, as well as other associated mental and physical defects such as deafness, posterior cortical cataracts, nystagmus and myopia.⁴ Diencephalic disturbances and pituitary and other hormone-secreting gland disturbances are also found in this group.

The unsolved problem in a case in which the hereditary factors have been elicited is whether the local cause is a vascular or neuro-epithelial disturbance,⁷ or an abiotrophy as first described by Gowers.⁵ He believes specific cells or tissues reach a premature senility and that it is this trait which is inherited, accounting for the pathology in the retina. Collins in a somewhat similar view believes the cells develop normally but lack vitality to continue their normal function. This latter premise meets every requirement of fulfilling the hope of a satisfactory explanation, but if it is true, the physician will never be able to offer any aid to this group of unfortunate people. The theory of the vascular and vasomotor factors offers the best possibilities from a therapeutic point of view.

The evidence in favor of a toxic substance which produces a destruction of the neuro-epithelium, such as a disturbed hepatic function, a cholesterolemia which reaches 180 to 200 milligrams per cent in early cases to 350 to 380 milligrams per cent in advanced cases⁶ or a malfunction of the pituitary and other hormone-secreting glands⁴ lends encouragement to further therapeutic possibilities, if and when the true nature of the phenomenon is unveiled.

The treatment of this interesting disease may be divided into medical, surgical and educational classifications. The medical therapeutics may be passed quickly as a maze of hit and miss attempts to treat a disease of which very little is known. Drug therapy is directed in two channels: first, to dilate the arteries and arterioles and improve the volume of the vascular bed of the choroid and retina; and second, to raise or stimulate metabolism, that is, improve the oxidation and nutrition of the retina. A few of the procedures tried with little or no benefits are liver therapy, cod liver oil, organotherapy and antisyphilitic treatment, roentgen rays, acetyl choline, female sex hormones, thyroid and pituitary extract, strychnia and arsenic.

Wilmer, in 1924, proposed a plan for the education of those families afflicted with the disease. Realizing the hereditary factors involved, he urged the medical profession and authorities in genetics and eugenics, to promulgate the facts to the public relative to intermarriage of persons from families so afflicted. When one assimilates the intricate hereditary combinations whereby the disease may be transmitted, it becomes an impossible task to blot out the malady by avoiding marriages and propagation among those afflicted.

In recent years¹¹ surgical therapy has been attempted for the arrest of retinitis pigmentosa by cervical sympathectomy following surgery on the sympathetic chain, which gave favorable results in Volkmann's ischemia, thrombo-angiitis and angina pectoris.¹³ According to Starling, all of the vasoconstrictor nerves of the body leave the spinal cord by the anterior roots of the spinal nerves from the first dorsal to the third or fourth lumbar. White rami communicantes pass from these roots to the ganglia of the sympathetic chain lying along the front of the vertebral column. The fibers to the head and neck leave by the first four thoracic nerves, pass into the sympathetic chain through the stellate ganglion to the inferior cervical ganglion and up the cervical sympathetic trunk to the superior cervical ganglion. Here they end and the impulses are carried by a fresh relay from cells in this ganglion; they travel as non-medullated fibers

on the walls of the carotid artery and its branches.²

In choosing a site for an attack on the sympathetic network, we find again a difference of opinion. These may be grouped in three categories and each method has its advocates: first, resection of the superior cervical ganglion;⁸ second, carotid ganglion sympathectomy;¹⁴ and third, resection of the cervicothoracic-sympathetic ganglion or stellectomy.¹⁴ The fusion of the third cervical and first thoracic ganglia forms the stellate ganglion. The confusion in technics and in results is to be expected when we remember that from the stellate ganglion there are at present three recognized pathways to the head: the carotid plexus formed by the internal and external carotid nerves; the sympathetic trunk and its middle and upper cervical ganglia ending in the cavernous plexus; and the spinal nerve which runs in the direction of the spinal artery and ends in the circle of Willis. The ocular modifications expected from stellectomy are Horner's syndrome, enophthalmos, miosis or ptosis. If this syndrome does not result in a low operation, it was not well done. The changes in the optic function desired are modification in the visual keenness and modification in the visual field. The visual acuity may improve in twelve to twenty-four hours, especially night vision, or it may be delayed for a few weeks. The improvement usually appears on the side operated, but cases have been reported in which the patients have shown improvement on the opposite side. The best results have been obtained in younger individuals and those in whom the disease has not become far advanced, or when the visual field has shown only an early constriction.

The general modifications are the vasomotor alterations. There have been reported violent headaches of the congestive type and pain in the precordial area or in the upper extremities. The latter may be prevented by careful sectioning of the nerve trunk; fibers which lead to the upper extremities must be avoided. Cardiac disturbance has been one of the main objections to the procedure. However, in younger patients with normal cardiac functions these sequelae need not be feared. Surgery has not produced the good results which its early advocates predicted. However, with a careful selection of early cases in younger individuals and with an improved technic, we may expect better results in the future.

CONCLUSIONS

Retinitis pigmentosa is a disease of the neuroepithelial outer one-third of the retina. The etiology is undetermined except for the hereditary factors. Treatment has been varied and of little

avail with the exception of surgical treatment, altering the vasomotor control to the coats of the eyeball by severing the sympathetic nerve supply to this area. Out of the chaos of diverging theories and opinions, research may in time solve this most perplexing disease.

Discussion

Dr. Willis L. McConkie, Carroll: It may be said of retinitis pigmentosa that there is no general agreement concerning its etiology or its pathologic findings. Further pathologic studies of early cases should clear up some disputed points; namely, the origin of the pigment, which some contend comes from the choroid, and whether or not there is sufficient involvement of the choriocapillaris to lend substance to the theory that the retinal changes are due to a deficient blood supply in this structure. Further blood studies should be encouraged in order that we may evaluate the significance of the presence of cholesterol, which has been reported present in retinitis pigmentosa in greatly increasing amounts as the disease advances. Reports of high incidence of associated disease in the pituitary gland suggest that further study along this line might be profitable.

Review of the literature brings one to the conclusion that any treatment offered to these unfortunate people must be considered experimental, and is based, more or less, upon the various theories of the etiology and pathology either known or suspected of being present. The most interesting work along treatment lines has been that directed toward improving the blood supply by surgical removal of the sympathetic control. The dilatation obtained in this way is said not to be permanent and leads to the supposition that there may be present in the blood some substance which can cause vasoconstriction by direct action peripheral to the nerve endings. At any rate the results of sympathectomy have not been uniform and nothing in the way of startling improvement has been obtained, although some observers feel that the progress of the disease may be stopped. If this is true, it is regrettable that these cases are not attacked sooner, since most of the reported cases have been well advanced before the work was done. When it is remembered that destruction of the rods and cones is progressive as the disease advances, it would appear that any treatment which will halt the progress of the disease, to say nothing of improving the visual fields, is about all which could be expected.

Dr. William P. Hofmann, Davenport: I feel responsible for our chairman's interest in this incurable disease of the retina because of an interesting case of atypical retinitis pigmentosa in one of my patients, which he, and many other men, observed at the annual meeting of the Iowa State Medical Society in Davenport, one year ago.

I think this subject quite apropos, since these cases, although they occur infrequently, do come up in an ordinary office practice. The onset of the disease is insidious and it is usually observed during

early adult life. The patient complains mostly of serious reduction in visual acuity. On careful questioning he will give a history of night blindness, beginning often in youth.

The particular patient whom I observed gave a history of nyctalopia, which she had had as long as she could remember, and stated that she never cared to go out after dark because of her inability to see. While she considered the night blindness something of an individual peculiarity, she thought everyone was afflicted with it to some extent. There was no evidence of similar trouble in other members of her family.

No doubt there are factors in the etiology of the disease other than those responsible for pigmentary degeneration of the retina. Many of these patients show very little or any pigment, although they have the atypical degenerative changes in the retinal vessels with frequent degenerative changes in the choroidal vessels also. There is an hereditary influence in approximately one-half of the recorded cases.

The main pathology seems to be in the neuroepithelium. The rods in particular are first affected. There is a disturbance of the pigment epithelial layer of the retina with piling up of the pigment, disorganization of the rods and cones, and with migration of the pigment to the inner layers of the retina where it tends to accumulate around the retinal vessels. Degenerative changes occur in the retinal vessels, and many, although not all, show sclerosis of the choroidal vessels.

I would like to know if the essayist has observed any cases in albinos? Another question I have in mind concerns the use of Vitamin A in night blindness. Much has been reported of its value. In my experience I have not seen cases of night blindness other than those of retinitis pigmentosa. I would appreciate knowing the method of determining night blindness. Possibly I have been overlooking many cases of this Vitamin A deficiency.

Pigmentary degeneration of the retina is frequently associated with other degenerative changes in the nervous system and the possibility of anomalies in the internal secretions. The Laurence-Moon-Biedl syndrome, which the speaker mentioned, indicates an anomaly of the pituitary function.

After hearing Dr. McNamee's splendid paper, I feel he has made a very careful survey of the literature and, personally, I am convinced that we are not a step closer to solving the etiologic factor, or, on the other hand, able to offer anything particularly effective in arresting the course of this disease.

Because of the slow progression of the disease, a hopeless prognosis should not be given in these cases. Many of the patients will arrive at mature age, and may retain adequate vision for years by guarding their general health, wearing properly fitted glasses and eliminating all foci of infection. These all have some influence on the well-being of the patient. These patients should be placed on a

well-balanced diet, with an additional rationing of the vitamins, especially Vitamin C. Large doses of Vitamin A may possibly delay the process of deterioration. In addition to this, we may use retrobulbar injections of one cubic centimeter of 1:1000 atropine sulfate to improve the circulation in the optic nerve and the choriocapillaris. If a complicating cataract is present, it should be removed.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

ANOMALY OF THE PATELLA WITH FRACTURE UNDETERMINABLE BY X-RAY EXAMINATION

JOHN C. HANCOCK, M.D., Dubuque

Adams and Leonard¹ in a definitive article in 1925 brought out the historical background of the identification and occurrence, the criteria of diagnosis and the importance of differentiating anomalies from fractures of the patella. The point was made so convincingly that one is inclined to conclude that anomaly and fracture are incompatible in the same patella. The following case is reported with reference to establishing that anomaly and fracture do coexist; that x-ray examination may be positive as to the anomaly and negative as to the fracture; that clinical criteria rather than x-ray may determine the diagnosis; and finally, the omission of surgical treatment of the fracture may be as compromising to the functional integrity of the joint as unnecessary fracture treatment in the presence of a simple anomaly alone.

CASE REPORT

Chief Complaint: The patient, a white man fifty-nine years of age, was admitted to The Finley Hospital March 4, 1940, because of pain and swelling of the right knee as well as disability upon walking.

Family and Past History: Irrelevant.

Present Illness: While getting off a moving locomotive, the patient caught his heel on a projecting bolt in the footboard and fell, striking the right knee on the ground. He thought he felt something crack in the knee. The knee became painful but the patient was able to walk home. During the night the knee became swollen.

Physical Examination: On the following day, the right knee showed three centimeters of swelling as compared with the left. There was some fluctuation, ill-defined discrete masses in the outer



Fig. 1. Anteroposterior roentgenogram showing right patellar anomalies.

upper quadrant of the patellar area, and crepitus with tenderness in the outer lower quadrant. The general examination was essentially negative. X-ray examination indicated an anomaly of the outer upper quadrant of the right patella only, and no fracture (Figures 1 and 2). This finding was corroborated by a consultant radiologist. Neither observer was able to detect a fracture of the outer lower quadrant of the patella. The films showed suprapatellar bursitis in the right

knee and hypertrophic arthritis in both knees. There was no anomaly of the left patella.

Provisional Clinical Diagnosis: Anomaly of the right patella with suprapatellar bursitis; bilateral hypertrophic arthritis.



Fig. 2. Lateral roentgenogram of the right patella.

Course in the Hospital: The knee was immobilized for several days and the swelling was reduced to 0.5 of a centimeter of circumference and the pain became negligible. However, definitely localized and marked tenderness, associated with distinct crepitus, consistently persisted in the outer lower quadrant of the right patella. On this basis, a preoperative diagnosis was made of anomaly of the right patella at the regular site in the outer upper quadrant and fracture of the outer lower quadrant of the right patella.

Operative Notes: Upon uncovering the patella, a fresh fracture of the outer lower quadrant, a small rent in the synovial membrane at the outer periphery of the patella and a small amount of blood in the adjacent region of the joint cavity were found. The line of fracture was like a very much streamlined oblique "S", starting superficially near the median line of the anterior surface of the patella and extending gently outward with the convexity posterior to the lateral articular surface of the periphery and ending in a rent in the synovial membrane. The lateral ligamentous attachment of the outer lower quadrant was not compromised. Upon enlarging the

opening into the joint cavity, the outer upper quadrant revealed two discrete masses together accounting for the displacement of this area of the patellar space. The masses varied in shape and size and corresponded to their shadows on the x-ray film. They were irregular in shape, rounded, hard and protruded into the joint cavity. One was more sessile while the other was more pedunculated. Both were covered with smooth untraumatized synovial membrane. Since they were serving no useful purpose and were a possible menace, they were excised and the synovial wounds sutured. The fracture of the lower quadrant was adequately secured by a kangaroo tendon suture. The wound was closed and the extremity immobilized in a fixed dressing. Convalescence was uneventful and full recovery of function has persisted now for over two years.

COMMENT

There are several features worthy of comment in this case. First is the matter of diagnosis of the fracture. While appreciating the value of accessory means of diagnosis, especially the x-ray in fractures, experience has taught me in cases of conflict to give precedence in diagnosis to consistently present, definite and categoric clinical findings. Someone has stressed the importance of definite localized tenderness as the most valuable and sometimes the only sign of fracture and the test which most accurately defines the site. It was on this basis that the diagnosis of fracture of the outer lower quadrant was made in spite of the negative x-ray findings of fracture. The sec-

tal anomalies erroneously diagnosed as fractures. As points of differentiation, they mention that the congenital anomaly always occurs in the outer upper quadrant of the patella, is usually bilateral, and while the contour of the patella is essentially normal, the upper outer quadrant usually exhibits one or more fragments of bone of the same structure as the main body of the patella. The outer upper quadrant is an unusual site for fracture of the patella, and the anomalies can be present in the absence of a history of adequate causation of a fracture. They do not mention the coexistence of the anomaly and a fracture as was encountered in this case, nor the possible disaster to the patient by overlooking and failing to treat the fracture; nor do they mention the defeat of the economy contemplated from the compensation angle. Finally, nothing is said about the increase in the inherent or intrinsic weakness of the lower outer quadrant of the patella in cases of anomalies. In the nature of things, the lower outer quadrant of the patella forms a lateral projection from the body of the patella and this renders it vulnerable to fracture.

CONCLUSIONS

1. The congenital anomaly was duly recognized.
2. In addition, a fracture of the same patella was also diagnosed and treated. X-ray examination was entirely negative for fracture and clinical criteria determined the diagnosis.
3. In view of the increased inherent weakness of the outer lower quadrant of the patella by virtue of the anomaly, trauma relatively less than necessary to produce fracture in a normal patella may have been adequate to produce fracture of the outer lower quadrant of the deformed patella.
4. Fracture should be borne in mind in dealing with anomalies of the patella and treated accordingly.
5. Excision of the anomalous bodies of the outer upper quadrant was easily accomplished, was productive of no demonstrable detriment, and may have removed a potential menace.

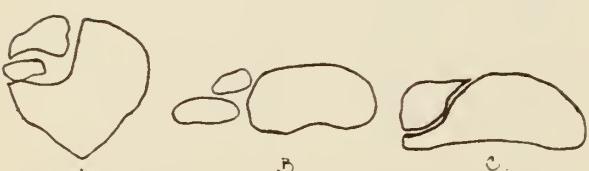


Fig. 3. Diagrams of right patella. (a) Anterior view. (b) Cross section of the upper half showing anomalies in outer upper quadrant. (c) Cross section of the lower half of the fracture line in outer lower quadrant.

ond was the diagnosis of the anomaly at the regular site in the outer upper quadrant in spite of a normal patella on the opposite side. In the great majority of cases, the developmental anomaly is bilateral, and an anomaly of a single patella is in itself anomalous. The conditions found in this case are shown diagrammatically in Figure 3.

In their paper, Adams and Leonard state that anomalies of the patella are more common than is generally supposed. In a series of sixty-three cases of fractured patellae encountered in one year, three of them (3.17 per cent) were congeni-

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Additions to Knowledge of Encephalitis

Recovery of Viruses from Mosquitoes

Various investigators have in recent years reported unsuccessful attempts to recover viruses causative of encephalitis, from insects and other arthropods. Kitselman and Grundman (1940, Kansas) reported recovery of the virus of western equine encephalomyelitis from a naturally infected arthropod, *Triatoma sanguisuga*.

Hammon, Reeves, Brookman and Izumi,¹ working in Yakima Valley, Washington, in the summer of 1941, collected more than fifteen thousand live mosquitoes and arthropods. Included were mosquitoes (twelve species), house flies, black flies, ticks, mites, gnats, bed bugs, lice and deer flies. The specimens were identified, sealed in glass tubes, kept frozen with dry ice and transported to the laboratory. Separate suspensions of the various species were later inoculated into laboratory animals (guinea pigs, mice and chick embryos). Among 254 pools tested, "five were found to contain the virus of the western type of equine encephalitis and three the virus of St. Louis encephalitis. All of the viruses were isolated from a single species of mosquito, *Culex tarsalis*, Coq. [Coquillett]. * * * This represents the first recovery of St. Louis virus from any source other than human tissues and the first recovery of either virus from a mosquito."

Procedure in Isolation of Virus

Hammon and associates² describe the method of preparing saline suspensions of insect or arthropod species for animal inoculation. The sealed tube containing about 75 to 100 specimens of *Culex tarsalis* or other arthropod species is opened and the specimens are placed on gauze and washed with salt solution. The specimens are ground in a mortar containing alundum and suspended in a small amount of sheep serum, saline solution.

Bacterial contamination is removed by centrifugation. When prepared, the inoculum is introduced intracerebrally into laboratory animals. Swiss mice have been found to be more satisfactory for work of this nature than guinea pigs or chick embryos. The viruses of western equine encephalomyelitis and of St. Louis encephalitis are identified by neutralization tests performed with specific hyperimmune serum.

Feeding Habits of Culex Tarsalis

Recovery of the viruses of western equine encephalitis and of St. Louis encephalitis from *Culex tarsalis* mosquitoes caught in nature, has been reported by Hammon and his co-workers of the George Williams Hooper Foundation, University of California. The same investigators have found that the serum of nearly 50 per cent of domestic animals and fowl studied, and of a smaller percentage of wild birds and mammals, contains neutralizing antibodies against both of the viruses mentioned.

In order to obtain more information regarding the possible part played by *Culex tarsalis* in the spread of virus among animals and birds, Bang and Reeves³ have examined the stomach contents of this mosquito as a means of determining its feeding habits.

The method comprises use of the precipitin test, carried out with dried blood from engorged mosquitoes and with specific rabbit antiserum developed by repeated injection of serum from animals such as the cow, horse, dog, chicken or sheep. A saline suspension of the blood taken from engorged mosquitoes is carefully overlaid on the specific antiserum in a small tube. The ring test is positive when the precipitate appears within an hour at the interface of the two liquids.

The result is checked with known specimens, using the same technic.

Precipitin tests, as carried out by the above mentioned workers, showed that *Culex tarsalis* feeds in nature on cows, horses, man, pigs, chickens (other birds?) and sheep.

Conclusion

Hammon and his co-authors⁴ summarize results of their studies and state: "The evidence which has been reviewed makes it seem probable that *Culex tarsalis* is the most important vector of western equine and St. Louis encephalitis viruses in the Yakima Valley. Its possible rôle elsewhere will have to be judged on the basis of local observations."

Mosquito collection in Iowa as conducted in recent years by J. A. Rowe,⁵ until recently research entomologist, Department of Zoology and Entomology, Iowa State College, has revealed that *Culex tarsalis* occurs in greater abundance in the state than any other culicine species.

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PREVALENCE OF ENCEPHALITIS

One case of encephalitis (Webster County) was reported for the month of June as compared with two cases for the same month of last year. Two cases were reported during July from Guthrie and Dallas Counties as compared with five for the same month of 1941. Three cases were officially reported to the Department in August (through the 20th), two from Fayette and one from Woodbury County; in August of 1941, cases totaled 51.

PREVALENCE OF POLIOMYELITIS

During the month of June, one case of poliomyelitis was notified to the State Department of Health, from Boone County. In July, reported cases numbered six, including four from Polk County and one each from Tama and Webster Counties. Reports of five cases were received

in August (through the 20th), three with occurrence in Polk County, one in Poweshiek and one in Story County.

On the basis of reports for the nine-year period from 1931 to 1940, the expected number of cases for July was two, the actual number six. With the exception of Polk County, an unusual prevalence of the disease was not indicated for the first three weeks of August, nine cases being the average or expected number for the state for the entire month.

NEUTRALIZATION TESTS FOR ENCEPHALITIS

During the months of 1941 and particularly in August, September and October, specimens from 42 patients were forwarded for analysis to the State Hygienic Laboratory at Iowa City and to the Rocky Mountain Laboratory of the United States Public Health Service at Hamilton, Montana. Neutralization tests to determine the presence of antibodies against encephalitis virus were carried out in the Public Health Service laboratory under the direction of Herald R. Cox, Ph.D.

Among eight serum specimens from patients in the Council Bluffs area (Pottawattamie County), four sera proved to have antibodies against western equine virus, while two others showed immune substances against both western equine and St. Louis strains of encephalitis virus.

Nine blood specimens were examined from the Sioux City area (Woodbury County). Three of the sera were found to contain antibodies against western equine and one against the St. Louis type of virus; in addition two specimens had neutralizing antibodies against viruses of both the St. Louis and western equine forms of encephalitis.

Serum specimens from other counties of the state were not found to contain neutralizing antibodies against the above mentioned viruses.

PREVALENCE OF DISEASE

Disease	July '42	June '42	July '41	Reported From	Most Cases
Diphtheria	1	6	8	Black Hawk	
Scarlet Fever	37	72	57	For the State	
Typhoid Fever	8	4	13	Hamilton, Johnson, Madison, Poweshiek, Scott, Webster	
Smallpox	0	2	2	None	
Measles	226	833	225	Woodbury, Linn, Black Hawk	
Whooping Cough	145	99	199	Des Moines, Dubuque, Black Hawk, Linn	
Brucellosis	41	23	32	For the State	
Chickenpox	46	172	55	Woodbury, Dubuque	
German Measles	3	23	3	Clinton	
Influenza	1	0	4	Boone	
Malaria	1	0	10	Jasper	
Mumps	128	272	112	Dubuque, Linn, Story	
Pneumonia	19	38	25	For the State	
Poliomyelitis	6	1	10	Polk, Tama, Webster	
Tuberculosis	147	2	35	For the State	
Gonorrhea	130	108	117	For the State	
Syphilis	256	264	180	For the State	

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ISSUED MONTHLY

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 DENNIS H. KELLY, Associate Editor..... Des Moines

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MISS STEWART LEAVES THE JOURNAL

The JOURNAL announces regretfully that with the publication of this issue Miss Virginia Stewart terminates her association with the editorial staff. Virginia, as she has come to be known by many hundreds of doctors and others in the Iowa State Medical Society, plans to be married in the near future and will make her new home in New Haven, Connecticut.

Miss Stewart has been the "wheel within the wheels" on the JOURNAL's staff for fifteen years. It has been during her term of service that the JOURNAL has ranked well up with the leaders among state journals of the country. Many of the innovations and improvements which have been adopted to maintain the JOURNAL's progressive policy have been the result of her farsighted vision. A record of which the whole central office, including the Board of Trustees, is justly proud is that during the entire period of her association with the JOURNAL never once has the monthly publication date been late. Not infrequently this meant burning of the midnight oil and numerous trips to the publishers at all hours of the day or night. But the traditional spirit of the "show must go on" has always been unquestionably accepted.

Few are aware of the intricate detail involved in the editing and grammatical corrections of manuscripts and of other material submitted for publication so that anyone anywhere who reads the published article may not have his or her literary "ear" unduly sensitized. In this respect we, the editors, have been able to rest, entirely confident, that each issue of the JOURNAL would be a source of pride not only to us but to the whole Society as well.

The JOURNAL has been fortunate in having the capable, efficient and talented services of Miss Stewart in one of its most important positions. We are sorry to see her go, and we are sure we voice the sentiments of the whole Society when we say that we shall miss her and that we wish her happiness and prosperity in her new life.

TREATMENT OF DIABETIC COMA

Diabetic coma has long been recognized as one of the dramatic emergencies of medical practice. Even with insulin the mortality rate among this group of patients has in the past been sufficiently large to cause concern for the outcome in any individual case of more than average severity. Now comes a report from Joslin's Clinic in Boston, published in the August 8 issue of the *Journal of the American Medical Association*, that no death has occurred among 62 successive cases of diabetic coma treated between August, 1940 and July 15, 1942. The achievement of such a perfect record, coming from one of the outstanding diabetic clinics in the world, is of immediate interest to physicians everywhere. It will be worthwhile for those concerned to review the method of treatment employed by Dr. Joslin and his associates in securing their enviable results.

According to the authors, the paramount issue which must always be kept in mind is that diabetic coma is an acute deficiency state in which lack of insulin is the primary disturbance. Everything else must be subordinate to supplying insulin in adequate amounts, regardless of how many units this may be. In the average case insulin is given in 50 unit doses every half hour for the first two or three hours. By this time reports on the blood sugar content, carbon dioxide combining power, nonprotein nitrogen and chloride content of the blood will be available. If no improvement is noted, even larger doses of insulin at half-hour intervals may be necessary. On the other hand, if the patient is improving and urine specimens can be obtained at hourly intervals, qualitative Benedict tests done at hourly intervals may be employed as the guide for further insulin treatment. Twenty-four units of insulin are given when the Benedict reaction is red, 20 when it is orange, 16 when yellow, 12 when yellow-green and no insulin when green or blue.

Concurrently with insulin administration, attention is given to the restoration and maintenance of fluid and electrolyte balance. In the Joslin Clinic the choice of solutions for this purpose is isotonic sodium chloride. The administration of this solution intravenously is begun immediately, and from

1,000 to 1,500 cubic centimeters are given one or more times in the first six hours of treatment. Dextrose is not added to the fluid, except for special indications, because the sugar which is already present in excess can be utilized if enough insulin is given, and because urine and blood sugar determinations lose their value as guides to insulin treatment when extra dextrose is being added. Nor do the authors see any particular advantage in giving alkali to raise the plasma carbon dioxide level. Alkali was not given to any of the 62 patients in their series, all of whom recovered without it. Plasma or whole blood transfusions are indicated in patients who present a picture of shock. Gastric lavage is carried out in all patients as soon as possible in order to relieve distention and to prevent aspiration into the lungs. An enema is also given if there is abdominal distention.

The above resumé covers the essential points of the treatment of diabetic coma for the first few hours as outlined by Joslin and his associates. The recommended procedures are not complicated and if such simple measures have been successful in relieving diabetic coma in 62 consecutive patients, they should be equally effective in the hands of other physicians. A great deal of good will undoubtedly be accomplished by the publication of this valuable article.

STATUS OF HOSPITAL INSURANCE CONTRACT DURING MILITARY SERVICE

Any subscriber who enters any branch of the military service of the United States of America may have his hospital service plan contract continued on an inactive basis during the period of his active federal military service. During this time no subscription fees will be payable. The contract may be revived and placed in full effect within sixty days after discharge or when active federal military service has ceased by resuming payment from the date of such revival.

Family Contract: Any subscriber who is enrolled under a family contract and wishes to continue protection for his family members may do so on the following terms:

a. Where a contract covers only a spouse and no children, or one child under eighteen years of age and no spouse, the contract may be continued for the protection of the one dependent only upon payment of the regular charges for a single person contract; in this case the one dependent shall be considered the subscriber and shall be entitled to the benefits for all services covered by the contract for a subscriber.

b. Where a contract covers more than one dependent the rate will remain the same as at present. In this case the spouse, or if no spouse is listed on the contract, the eldest child under eighteen years of age, shall be considered the subscriber and shall be entitled to the benefits for all services covered by the contract for a subscriber.

At the conclusion of active federal military service the subscriber must reinstate his coverage under the contract and all will be covered by it at the rates and under the terms then in effect. Subscribers who wish to continue the benefits of hospital service for their family members will be required to notify the Plan in writing, stating the desire for this coverage.

Payment: If the spouse or dependent who takes the place of the subscriber is employed where there is a group enrolled, the membership fees can be paid through the group method. If not so employed, payment for the service shall be made quarterly, payable in advance. Notices of amounts due under the contracts will be mailed to the home address of the subscriber.

PRINCIPLES OF THE KENNY TREATMENT

Recently our attention was called to an article on the Kenny method of treatment published in the *National Foundation News*. We found it worthwhile and thought it might interest some of our readers who otherwise would not see it. The article, in part, follows:

"In 1940 Miss Kenny came to the National Foundation for Infantile Paralysis, bearing letters of introduction from her Premier in Queensland, Australia. She was established at the University of Minnesota, aided in her work by funds from the National Foundation. A program of study was set up. The purpose of this was to test the claims advanced by Miss Kenny, to provide her with patients and to see if she could produce results that were better than had been previously achieved. Full cooperation was given by the University's Departments of Orthopedic Surgery and Physical Therapy.

"At the end of the year a special medical committee, appointed by President Basil O'Connor, made a study of these results. Their report was favorable and, in substance, said that Miss Kenny had been able to do better with her patients than anyone had heretofore done. More patients were made available to her and still further study was carried on at the Minneapolis General and the University of Minnesota Hospitals. At the Foundation's Annual Medical Meeting in December, 1941, her work was again reviewed by our medical advisory committees. We have carried out the

specific recommendations which they made at that time.

"All this was done on the evidence that patients appeared to be better after receiving her form of treatment. There was nothing really scientific about this. There was no definite proof. It was open to the contention that perhaps they might have recovered anyway. But with renewed energy research physicians took up the study of new phases of infantile paralysis.

"Physicians had been taught that infantile paralysis was really paralysis. Kenny claimed that infantile paralysis was rarely paralysis, but was really spasm of muscles. This was an exactly opposite concept. Physicians used a method of treatment which consisted of immobilization by casts or splints. Kenny claimed that these were all wrong for they merely increased the spasm and led to contractures and permanent deformities. According to her, the thing to do was to apply heat to relax the spasm and then start very early passive and active motion of the involved muscles.

"Quickly with aid from the National Foundation men of science took this problem into their laboratories. Time has not permitted for evaluation of all points, but certain things have been brought out showing that Kenny's claims are on a sound foundation.

"In one laboratory equipped with delicate electrical instruments the strength of nerve impulses was determined in both paralyzed muscles and those in spasm. As an impulse to produce motion travels down the course of a nerve to a muscle, minute electrical currents are generated. These can be picked up and magnified, as are the waves coming to a radio receiving set. They can be measured, recorded photographically, studied and analyzed. It was found that muscles which were unable to move were not paralyzed in the sense that their nerves were destroyed, but were in spasm. Nerve impulses still were being sent to them, but these did not produce motion.

"In this same laboratory, heat after the Kenny manner, was applied to some of these muscles. They showed recovery of their ability to transmit nerve impulses in a normal way and to have these impulses translated into useful motion. Other muscles, with spasm, were not treated. After long weeks they still showed their spasm! Here was the first real proof that Miss Kenny was treating a condition which actually did exist!

"Let it not be misunderstood—there may be true paralysis. In some cases the disease is so severe and the destruction of nerve cells is so complete that there is true paralysis. Nerves are dead. They transmit no impulses to muscles. The Kenny

method cannot restore life to nerves that are dead. Here the paralysis is permanent. Only surgery and mechanical bracing with steel and leather can provide support and strength to this form of crippling.

"Other laboratories carried on studies. In the experimental animal, nerves to muscles were crushed or cut. This is as close as the experimenter can come to producing symptoms like those of infantile paralysis. The muscles supplied by these nerves were paralyzed, but the laboratorian had not killed the nerve cells; he had only temporarily broken the pathway between nerve centers and muscles. Nature repaired this break; nerve fibers regenerated. Some of the experimental animals had their paralyzed legs placed in splints or plaster casts. Others were allowed to run free, moving about as best they could. The rate and degree of recovery of the two groups were compared. Those with the casts and splints, with complete "rest" of the paralyzed muscles, recovered more slowly and to a lesser degree than those that were not splinted.

"While these animals did not have infantile paralysis, and while they were not little children recovering from an acute illness, the two conditions were not too dissimilar. At least it was shown that complete immobilization by mechanical means in such nerve injury cases caused damage. This apparently offered some justification for Miss Kenny's contention that splints and plaster casts should not be used in infantile paralysis.

"These are but the preliminary results of two types of studies. Others are being carried on in many places. In time, as new truths are learned, improvements in treatment may be expected. Armed with such facts physicians can separate the true from the false. They can improve, add to and modify the treatment until the best possible care will be made available.

"A great tribute must be paid to Miss Elizabeth Kenny of Australia, not only for her contribution of an improved method of treatment of poliomyelitis, but also for furnishing a stimulus for a new line of scientific endeavor and research—research that may go far in supplying information to fill in the many gaps in our knowledge of this disease."

Unquestionably Miss Kenny's method of treating poliomyelitis is rapidly being accepted in America as superior to other methods. Those who have been to the University of Minnesota and have watched her at work have invariably come away with the conviction that "she's got something." Scientific experimentation has and is being carried on, and the published reports of some of these

seem definitely to confirm the correctness of her contentions. Mastering the details of her technic of applying hot packs and of muscle reeducation apparently is not a simple procedure which can be achieved in a few days' observation. An intensive study period of six months is necessary. A great number of technicians will have to receive this training if each community is to be properly equipped to give the benefits of this new treatment to its patients with poliomyelitis. Obviously, not all these technicians can be trained by Miss Kenny herself at the University of Minnesota. Other centers of instruction will have to be established; those who have been graduated from the Kenny course will, in turn, become instructors to pass on the special knowledge which they have gained. Only in this way will it be possible to build up a sufficient force to meet the needs of those who will be attacked by this crippling disease. With the wide publicity which has been given the Kenny treatment, it goes without saying that every victim of poliomyelitis from now on, anywhere in the country, will demand this method of treatment. It is a challenge which physicians, physiotherapists and nurses need to recognize and meet.

ECLAMPSIA AT THE UNIVERSITY HOSPITAL

Of special interest to Iowa physicians will be the article by Dr. Plass in the July 11 issue of the *Journal of the American Medical Association* on eclampsia at the University Hospital from 1926 to 1941.

A total of 80 eclamptic patients were encountered during this period and only seven of this number, or 8.75 per cent, died. Forty-five of the 84 infants, or 53.6 per cent, survived. Excluding 18 infants who weighed less than 1,500 grams at birth, the survival rate was 66.7 per cent. There were 19 stillbirths, including nine macerated fetuses.

From this experience with one of the most serious complications of obstetrics the author draws several important conclusions. Eclampsia is a medical condition and best results are obtained when therapy is restricted to simple medical means. Sedation with morphine sufficient to reduce the respirations to approximately twelve per minute, and the use of hypertonic dextrose solutions (25 per cent) intravenously to promote diuresis form the basis of therapy employed in this group of cases.

The author cautions against overtreatment in the desire to do everything possible in the exigency of the situation. Likewise, induction of labor and delivery by surgical means in the convulsive stage of eclampsia are deplored. These methods yield definitely poorer results due to overtaxing an al-

ready severely strained organism. On the other hand, induction of labor should not be delayed after the patient is prepared to face delivery with reasonable safety. Continuance of the pregnancy may result in or aggravate vascular or renal damage.

Study of the statistical data presented in the article reveals further facts of interest. For instance, 33. of the patients with eclampsia were young women under twenty years of age, among whom there were no deaths. In the third decade the fatality rate was 10.7 per cent; in the fourth, 14.3 per cent; and in the fifth, 40.0 per cent. This more favorable outcome in young persons is accounted for by the fact that pre-existing cardiovascular or renal disease is less likely to be present. The fetal death rate was highest in the patients with intercurrent eclampsia. Only six infants (24 per cent) survived in the 25 cases. During the period of the study there were 15,327 deliveries, giving an incidence of eclampsia of one in 191 deliveries.

The JOURNAL feels sure this valuable contribution by Dr. Plass will be studied widely with interest and with profit, and we are happy to call it to the attention of our readers.

ROSTER OF PHYSICIANS IN MILITARY SERVICE

As an item of interest to its readers, the JOURNAL will publish from time to time the names of physicians who are in military service. The following list contains the names of those, who, according to notices received by the central office, were in service as of August 26, 1942. The list is not complete, since all names are not forwarded to us at once, and the present addresses of many of the doctors are lacking. Every effort will be made to mail the JOURNAL and all important notices to the men in the service, and the central office will greatly appreciate the assistance of county society secretaries in keeping us informed when doctors leave for service, and the attention of the doctors in supplying us with their correct mailing addresses.

Physicians who are in military service will be carried as members in good standing without payment of dues when such action originates in their county societies.

Below is the honor roll:

Adair County
Cornell, Dale D., Greenfield (Camp Murray, Washington)
Gantz, Albert J., Greenfield (San Francisco, California)
Adams County
Willett, Wilton J., Carbon (Fort Smith, Arkansas)
Allamakee County
Hogan, Paul W., Waukon
Ivens, Milton H., Waukon (Camp Shelby, Louisiana)
Kiesau, Milton F., Postville (Fort Leonard Wood, Missouri)
Audubon County
Koehne, Frederick D., Audubon (Oroville, Washington)

- Benton County
 Koontz, Lyle W., Vinton
 Lewis, Leland S., Garrison
- Black Hawk County
 Butts, John H., Waterloo (Ames, Iowa)
 Henderson, Lauren J., Cedar Falls (Fort Ord, California)
 Hoyt, Charles N., Cedar Falls (McClellan Field, Alabama)
 Ludwick, Arthur L., Waterloo (A.P.O., New York, New York)
 Paige, Robert T., La Porte City (Des Moines, Iowa)
 Rohlf, Edward L., Jr., Waterloo (Springfield, Missouri)
 Smith, Eugene E., Waterloo (Scott Field, Illinois)
 Smith, Rudolph G., Waterloo (A.P.O., New York, New York)
 Trunnell, Thomas L., Waterloo (Great Lakes, Illinois)
- Boone County
 Brewster, Edward S., Boone (A.P.O., Los Angeles, California)
 Healy, Maurice D., Boone
 Shane, Robert S., Pilot Mound (Des Moines, Iowa)
- Bremer County
 Amlie, Paul J., Tripoli (Des Moines, Iowa)
 Osnes, Elias N., Readlyn (Vallejo, California)
- Buchanan County
 Barton, John C., Independence (Omaha, Nebraska)
 Leehey, Paul J., Independence (Fort Ord, California)
- Buena Vista County
 Almquist, Reuben E., Albert City (Camp Shelby, Mississippi)
 Brecher, Paul W., Storm Lake (Carlisle Barracks, Pennsylvania)
 Mailiard, Robert E., Storm Lake (Watertown, New York)
 Shope, Charles D., Storm Lake (Fort Des Moines, Iowa)
 Witte, Herbert J., Storm Lake (Fort Robinson, Nebraska)
- Butler County
 Andersen, Bruce V., Greene (Kansas City, Missouri)
 James, Roger A., Allison (Mare Island, California)
 Rolfs, Floyd O., Parkersburg (Springfield, Missouri)
- Calhoun County
 Grinley, Andrew V., Rockwell City (A.P.O., Seattle, Washington)
 Hobart, Francis W., Lake City (Camp Grant, Illinois)
 Peek, Levin H., Lake City (Jefferson Barracks, Missouri)
 Stevenson, William W., Rockwell City (San Francisco, California)
 Weyer, Joseph J., Lohrville (Camp Carson, Colorado)
- Carroll County
 Cochran, J. Lawrence, Carroll (Gulfport, Mississippi)
 Freedland, Maurice, Coon Rapids
 Morrison, John R., Carroll (Carlisle Barracks, Pennsylvania)
 Morrison, Roland B., Carroll (March Field, California)
 Scannell, Raymond C., Carroll (Fort Leonard Wood, Missouri)
- Cass County
 Egbert, Daniel S., Atlantic (Fort Snelling, Minnesota)
 Longstreth, Clyde M., Atlantic
 Needles, Roscoe M., Atlantic (Camp Polk, Louisiana)
- Cedar County
 Mosher, Martin L., West Branch (Camp Chaffee, Arkansas)
 O'Neal, Harold E., Tipton (Pine Camp, New York)
- Cerro Gordo County
 Adams, Carroll O., Mason City
 Egloff, William C., Mason City
 Hale, Albert E., Dougherty
 Harrison, Glenn E., Mason City (Camp Robinson, Arkansas)
 Holman, David O., Mason City (Camp Grant, Illinois)
 Lannon, James W., Clear Lake (Carlisle Barracks, Pennsylvania)
 Long, Draper L., Mason City (Santa Ana, California)
 Marinoss, Harry G., Mason City (Fort Riley, Kansas)
 Sternhill, Irving, Mason City (Camp Robinson, Arkansas)
- Cherokee County
 Bullock, Grant D., Washta (Camp Crowder, Missouri)
 Ihle, Charles W., Jr., Cherokee (Fort Leonard Wood, Missouri)
 Noble, Rusl P., Cherokee (Sacramento, California)
 Swift, Charles F., Jr., Cherokee (Fort Bliss, Texas)
- Chickasaw County
 Murphy, Arlo L., Fredericksburg (Fort Clayton, Panama Canal Zone)
 O'Connor, Edwin C., New Hampton (Camp Crowder, Missouri)
 Richmond, Paul C., New Hampton (Fort Leonard Wood, Missouri)
- Clay County
 Adams, Glenn W., Royal (Fort Clayton, Panama Canal Zone)
 Edington, Frank D., Spencer (Scott Field, Illinois)
 King, Dean H., Spencer
- Clayton County
 Anderson, Holger M., Strawberry Point (Omaha, Nebraska)
 Rhomberg, Edward B., Guttenberg (Fort Sam Houston, Texas)
- Clinton County
 King, Ross C., Clinton (Camp Chaffee, Arkansas)
 Meyer, Alfred K., Clinton (Denver, Colorado)
 Norment, John E., Clinton (Mare Island, California)
 Snyder, Dean C., De Witt
 Riedesel, Elmer V., Wheatland (Fort Douglas, Utah)
- Crawford County
 Fee, Charles H., Denison
 Maire, Eugene J., Vail (San Francisco, California)
 Wetrich, Max F., Manilla
- Dallas-Guthrie Counties
 Margolin, Julius M., Perry (Camp Chaffee, Arkansas)
 Nicoll, Charles A., Panora
 Osborn, Clarence R., Dexter
 Wilke, Frank A., Woodward (A.P.O., New York, New York)
- Decatur County
 Doss, William N., Leon (A.P.O., San Francisco, California)
 Gamet, Elmo E., Lamoni (Tacoma, Washington)
- Delaware County
 Baumgarten, Oscar, Earlville (Fort Ord, California)
- Des Moines County
 Aid, Francis H., Burlington
 Heitzman, Paul O., Burlington (Fort Leonard Wood, Missouri)
 Jenkins, George D., Burlington (Fort Dix, New Jersey)
 Lohmann, Carl J., Burlington
 McKitterick, John C., Burlington (Navy Pier, Chicago, Illinois)
 Murray, Jonathan H., Burlington
 Ober, Frank G., Burlington
 Russell, Edmund P., Burlington
- Dickinson County
 Buchanan, John J., Milford (Great Lakes, Illinois)
 Henning, Garold G., Milford (Fort Lewis, Washington)
 Rodawig, Don F., Spirit Lake (Camp Grant, Illinois)
- Dubuque County
 Conzett, Donald C., Dubuque (Cedar Rapids, Iowa)
 Entringer, Albert J., Dubuque (Camp Murray, Washington)
 Knoll, Albert H., Dubuque
 Langford, William R., Epworth (Rapid City, South Dakota)
 Leik, Donald W., Dubuque
 Mueller, John J., Dyersville
 Olson, Paul F., Dubuque (Bremerton, Washington)
 Plankers, Arthur G., Dubuque (Fort Sill, Oklahoma)
 Sharpe, Donald C., Dubuque (Fort Leonard Wood, Missouri)
 Smith, Carl W., Dubuque (Great Lakes, Illinois)
 Steffens, Lincoln F., Dubuque (Fort Snelling, Minnesota)
 Ward, Donovan F., Dubuque (Mare Island, California)
- Emmet County
 Clark, James P., Estherville
 Miller, Oscar H., Estherville (Great Lakes, Illinois)
- Fayette County
 Henderson, Walker B., Oelwein (Fort Leonard Wood, Missouri)
 Hess, Ardo M., West Union
 Moen, Harry P., West Union (Denver, Colorado)
- Floyd County
 Baltzell, Winston C., Charles City (Fort Sam Houston, Texas)
 Tolliver, Hillard A., Charles City (Fort Cronkhite, California)
- Franklin County
 Byers, Walter L., Sheffield
 Walton, Seth G., Hampton (Camp Robinson, Arkansas)
- Fremont County
 Kerr, W. Hawley, Hamburg
 Marrs, Walford D., Tabor (San Francisco, California)
 Wanamaker, A. Roy, Hamburg
- Greene County
 Castles, William A., Jr., Rippey (Fort Riley, Kansas)
 Hanson, Laurence C., Jefferson (Camp Grant, Illinois)
 Jongewaard, Albert J., Jefferson (Great Lakes, Illinois)
 Limberg, John I., Jr., Jefferson
- Hamilton County
 Howar, Bruce F., Jewell (A.P.O., New York, New York)
 James, David W., Kamrar (Fort Riley, Kansas)
 Lewis, William B., Webster City (Vancouver, Washington)
 Mooney, Felix P., Jewell (A.P.O., New York, New York)
 Ptacek, Joseph L., Webster City (Sheppard Field, Texas)
- Hancock-Winnebago Counties
 Dulmes, Abraham H., Klemme (Camp Lewis, Washington)
 Eller, Lancelot W., Kanawha (Fort Leonard Wood, Missouri)
 Shaw, David F., Britt (Long Beach, California)
 Thomas, Clifford W., Forest City
- Hardin County
 Houlahan, Francis W., Ackley (Fort Knox, Kentucky)
 Janssonius, John W., Eldora (Vancouver, Washington)
 Johnson, Robert J., Iowa Falls (Fort Bliss, Texas)
 Johnson, William A., Alden (Pendleton, Oregon)
 Todd, V. Stanley, Eldora (Camp Robinson, Arkansas)
- Harrison County
 Byrnes, Clemmet W., Dunlap (Jefferson Barracks, Missouri)
 Tamisiea, Francis X., Missouri Valley (Jefferson Barracks, Missouri)
- Henry County
 Brown, Wayne B., Mount Pleasant (Springfield, Missouri)
 Hartley, Byron D., Mount Pleasant (Phoenix, Arizona)
 Megorden, William H., Mount Pleasant
 Ristine, Leonard P., Mount Pleasant (Sioux Falls, South Dakota)

- Humboldt County
 Arent, Asa S., Humboldt (March Field, California)
 Coddington, James H., Humboldt
- Iowa County
 McDaniel, John D., Marengo (Fort Clark, Texas)
 Miller, Donald F., Williamsburg (Fort Leavenworth, Kansas)
- Jasper County
 Minkel, Roger M., Newton (A.P.O., New York, New York)
- Jefferson County
 Castell, John W., Fairfield (A.P.O., New York, New York)
 Gittler, Ludwig, Fairfield (A.P.O., New York, New York)
 Graber, Harold E., Fairfield (Camp Grant, Illinois)
 James, Lora D., Fairfield
 Taylor, Ingram C., Fairfield (Washington, D. C.)
- Johnson County
 Allen, James H., Iowa City
 Boiler, William F., Iowa City (Fort Leonard Wood, Missouri)
 Boyd, Eugene J., Iowa City (Camp Blanding, Florida)
 Brinkhous, Kenneth M., Iowa City (Danville, Kentucky)
 Cooper, Wayne K., Iowa City (Jefferson Barracks, Missouri)
 Diddle, Albert W., Iowa City (Key West, Florida)
 Elmquist, Homer S., Iowa City (San Diego, California)
 Feller, Alte E., Iowa City (Camp Claiborne, Louisiana)
 Flynn, Joseph E., Iowa City (Hot Springs, Arkansas)
 Fourt, Arthur S., Iowa City (Camp Claiborne, Louisiana)
 Francis, Norton L., Iowa City (Annapolis, Maryland)
 Garlinghouse, Robert O., Iowa City (Fort Snelling, Minnesota)
 Gilliland, C. R., Iowa City (Great Lakes, Illinois)
 Hardin, Robert C., Iowa City (A.P.O., New York, New York)
 Harris, Karl S., Iowa City (Camp Crowder, Missouri)
 Irwin, Ralph L., Iowa City (Great Lakes, Illinois)
 January, Lewis E., Iowa City (Davis Field, Arizona)
 Keislar, Henry D., Iowa City
 Longwell, Freeman H., Iowa City (Cumberland, Maryland)
 Nagyfay, Stephen F., Iowa City (Pensacola, Florida)
 Newman, Robert W., Iowa City (Upper Darby, Pennsylvania)
 Paulus, Edward W., Iowa City (A.P.O., New York, New York)
 Petersen, Vernon W., Iowa City (A.P.O., New York, New York)
 Sells, Robert L., Jr., Iowa City (Hamilton Field, California)
 Skouge, O. T., Iowa City
 Springer, Eugene W., Iowa City (Pontiac, Michigan)
 Stadler, Harold E., Iowa City (Fort Harrison, Indiana)
 Staags, William A., Iowa City (Camp Robinson, Arkansas)
 Stump, Robert B., Iowa City (Fort Leonard Wood, Missouri)
 Titus, Elton L., Iowa City (Fort Wright, New York)
 Vest, William M., Iowa City (Fort Ord, California)
 Ziffren, Sidney E., Iowa City (Springfield, Missouri)
- Jones County
 Beddoes, Morris G., Cascade (Omaha, Nebraska)
- Keokuk County
 Bjork, Floyd, Keota
 Montgomery, Guy E., Keota
 Wiley, Dudley, Hedrick (Mason City, Washington)
- Kossuth County
 Clapsaddle, Dean W., Burt (Durham, North Carolina)
 Williams, Robert L., Lakota (San Diego, California)
- Lee County
 Ashline, George H., Keokuk (Camp Young, California)
 Cleary, Hugh G., Fort Madison (Parsons, Kansas)
 Cooper, Raymond E., Keokuk (Fort Leonard Wood, Missouri)
 Johnstone, Alexander A., Keokuk (Camp Robinson, Arkansas)
 McKee, Thomas L., Keokuk (Fort Dix, New Jersey)
 Pumphrey, Loira C., Keokuk (Fort Leavenworth, Kansas)
 Rankin, John R., Keokuk (Mare Island, California)
 Steffey, Fred L., Keokuk (Fort Snelling, Minnesota)
- Linn County
 Andre, Gaylord R., Lisbon (Camp Barkeley, Texas)
 Challed, Don S., Cedar Rapids (Fort Ord, California)
 Coughlan, Vernon H., Cedar Rapids (Fort Snelling, Minnesota)
 Courter, Willard O., Springville (Fort Warren, Wyoming)
 Halpin, Lawrence J., Cedar Rapids (Atlanta, Georgia)
 Hecker, John T., Cedar Rapids (Santa Ana, California)
 Jirsar, Harold O., Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Keith, John J., Marion
 Kruckenberg, William G., Mount Vernon (Elgin, Illinois)
 Locher, Robert C., Cedar Rapids
 McConkie, Edwin B., Cedar Rapids (Jefferson Barracks, Missouri)
 Netolicky, Robert Y., Cedar Rapids (Mare Island, California)
 Noe, Carl A., Cedar Rapids (Hot Springs, Arkansas)
 Parke, John, Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Proctor, Rothwell D., Cedar Rapids (Corpus Christi, Texas)
 Redmond, James J., Cedar Rapids (Camp Claiborne, Louisiana)
 Sedlacek, Leo B., Cedar Rapids
 Sulek, Arthur E., Cedar Rapids (Camp Shelby, Mississippi)
 Woodhouse, Keith W., Cedar Rapids
 Wray, Robert M., Cedar Rapids (A.P.O., San Francisco, California)
 Yavorsky, William D., Cedar Rapids (A.P.O., San Francisco, California)
- Lucas County
 Lister, Kenneth E., Chariton (Fort Snelling, Minnesota)
- Lyon County
 Corcoran, Thomas E., Rock Rapids (A.P.O., New York, New York)
 Moriarty, John F., Rock Rapids (Fort Leonard Wood, Missouri)
- Madison County
 Boden, Harold N., Truro (Fresno, California)
 Wicks, Ralph F., Winterset (Portland, Oregon)
- Mahaska County
 Bennett, Geoffrey W., Oskaloosa (Des Moines, Iowa)
 Lemon, Kenneth M., Oskaloosa (Rapid City, South Dakota)
- Marion County
 Elliott, Vance J., Knoxville (South Laguna, California)
 Mater, Dwight A., Knoxville (Scott Field, Illinois)
 Ralston, F. Paul, Knoxville
 Schroeder, Mellgren C., Pella
- Marshall County
 Carpenter, Ralph C., Marshalltown (Vancouver, Washington)
 Marble, Edwin J., Marshalltown (San Diego, California)
 Marble, Willard P., Marshalltown (Walla Walla, Washington)
 Noonan, James J., Marshalltown (Fort Douglas, Utah)
 Phelps, Richard E., State Center (Camp Baker, California)
 Smith, Elmer M., State Center (Gowen Field, Idaho)
 Wells, Rodney C., Marshalltown (Gowen Field, Idaho)
- Mills County
 DeYoung, Ward A., Glenwood
 Shonka, Thomas E., Malvern (Camp Russell, Texas)
- Mitchell County
 Culbertson, Robert A., St. Ansgar (Fort Des Moines, Iowa)
 Moore, Edson E., (Camp Pickett, Virginia)
- Monona County
 Almer, Lennart E., Moorehead (Fort Knox, Kentucky)
 Stauch, Martin O., Whiting (Fort Rosicrants, California)
 Wainwright, Maxwell T., Mapleton
- Montgomery County
 Bastron, Harold C., Red Oak (Pendleton, Oregon)
 Moriarty, Lauren R., Villisca (Camp Robinson, Arkansas)
- Muscatine County
 Ady, Albert E., West Liberty (A.P.O., San Francisco, California)
 Carlson, Elmer H., Muscatine (Chicago, Illinois)
 Goad, Robley R., Muscatine (Hyattsville, Maryland)
 Muhs, Emil O., Muscatine (Camp Robinson, Arkansas)
 Sywassink, George A., Muscatine (Vancouver, Washington)
 Whitmer, Lyle H., Wilton Junction (Fort Sill, Oklahoma)
- O'Brien County
 Hayne, Willard W., Paullina (March Field, California)
 Moen, Stanley T., Hartley (Los Angeles, California)
 Myers, Kermit W., Sheldon (White Bear, Minnesota)
- Osceola County
 Kuntz, George S., Sibley (Carlisle Barracks, Pennsylvania)
- Page County
 Blackman, Nathan, Shenandoah
 Bossingham, Earl N., Clarinda (Camp Roberts, California)
 Burdick, Francis D., Shenandoah (Carlisle Barracks, Pennsylvania)
 Burnett, Francis K., Clarinda (Cheyenne, Wyoming)
 Little, Emmet B., Shenandoah
 Savage, Lester W., Shenandoah (Fort Meade, Maryland)
- Plymouth County
 Foss, Robert H., Remsen (Fort Wright, Washington)
- Pocahontas County
 Blair, Fred L., Jr., Fonda
 Larson, John B., Laurens
 Leserman, Lester K., Rolfe (Fort Riley, Kansas)
- Polk County
 Anderson, N. Boyd, Des Moines (Fort Custer, Michigan)
 Anspach, Royal S., Mitchellville (Randolph Field, Texas)
 Barner, John L., Des Moines (Atlanta, Georgia)
 Bates, Maurice T., Des Moines (Washington, D. C.)
 Bender, Herman R., Des Moines (Carlisle Barracks, Pennsylvania)
 Bruns, Paul D., Des Moines (Carlisle Barracks, Pennsylvania)
 Burgeson, Floyd M., Des Moines (A.P.O., New York, New York)
 Caldwell, John W., Des Moines (Edmonton, Alberta, Canada)
 Chambers, James W., Des Moines
 Chase, William B., Jr., Des Moines (Seattle, Washington)
 Connell, John R., Des Moines (A.P.O., New York, New York)
 Corn, Henry H., Des Moines (Omaha, Nebraska)
 Coughlan, Daniel W., Des Moines (Camp Robinson, Arkansas)
 Crowley, Fred A., Des Moines (Hot Springs, Arkansas)
 DeCicco, Ralph, Des Moines (Oahu, Hawaii)
 Decker, Henry G., Des Moines (San Diego, California)
 Dushkin, Milton A., Des Moines (Fort Huachuca, Arizona)
 Elliott, Olin A., Des Moines (Santa Ana, California)
 Ellis, Howard G., Des Moines

- Ervin, Lindsay J., Des Moines (Fort Clark, Texas)
 Fried, David, Des Moines (Carlisle Barracks, Pennsylvania)
 George, Everett M., Des Moines
 Gerchek, E. W., Des Moines
 Goldberg, Louie, Des Moines (Long Beach, California)
 Gordon, Arnold M., Des Moines (Camp Barkeley, Texas)
 Graeber, Frederick O., Des Moines (Aberdeen, South Dakota)
 Gurau, Henry H., Des Moines (Portland, Oregon)
 Haines, Diedrich J., Des Moines (Denver, Colorado)
 Hess, John, Jr., Des Moines (Carlisle Barracks, Pennsylvania)
 James, Audra D., Des Moines (Great Lakes, Illinois)
 Johnston, C. Harlan, Des Moines (Augusta, Georgia)
 Kast, Donald H., Des Moines (Fort Douglas, Utah)
 Kelly, Dennis H., Des Moines (Denver, Colorado)
 Klocksiem, Harold L., Des Moines
 Kottke, Elmer E., Des Moines (Denver, Colorado)
 La Tone, Salvatore, Des Moines (Carlisle Barracks, Pennsylvania)
 Lederman, James, Des Moines
 Lehman, Emery W., Des Moines (Vancouver, Washington)
 Maloney, Paul J., Des Moines (Fort Lewis, Washington)
 Marquis, George S., Des Moines (Great Lakes, Illinois)
 Martin, Lowell E., Des Moines
 Mauritz, Emory L., Des Moines (Camp Gruber, Oklahoma)
 McCoy, Harold J., Des Moines (Iowa City, Iowa)
 McDonald, Donald J., Des Moines (March Field, California)
 Mencher, E. W., Des Moines
 Merkel, Byron M., Des Moines (Galveston, Texas)
 Morden, R. Paul, Des Moines (March Field, California)
 Noun, Louis J., Des Moines (Great Lakes, Illinois)
 Patton, Bernard W., Des Moines (Camp Robinson, Arkansas)
 Pearlman, Leo R., Des Moines (Fort Ord, California)
 Peisen, Conan J., Des Moines
 Penn, Eugene C., West Des Moines (Spokane, Washington)
 Phillips, Allan B., Des Moines (Corpus Christi, Texas)
 Powell, Lester D., Des Moines (San Diego, California)
 Pratt, Elmer B., Des Moines (Camp Claiborne, Louisiana)
 Priestley, Joseph B., Des Moines (Camp Carson, Colorado)
 Purdy, William O., Des Moines (Camp Livingston, Louisiana)
 Riegelman, Ralph H., Des Moines (Camp Grant, Illinois)
 Schaeferle, Martin J., Des Moines (Carlisle Barracks, Pennsylvania)
 Schlaser, Vernon L., Des Moines (Great Lakes, Illinois)
 Shepherd, Lloyd K., Des Moines (A.P.O., New York, New York)
 Singer, Paul L., Des Moines (Camp Grant, Illinois)
 Skultety, James, Des Moines (Staten Island, New York)
 Smead, Howard H., Des Moines (Wichita Falls, Texas)
 Snodgrass, Ralph W., Des Moines (Fort Douglas, Utah)
 Snyder, Glen E., Grimes (Camp Robinson, Arkansas)
 Sohn, Herbert H., Des Moines (San Diego, California)
 Springer, Floyd A., Des Moines (San Francisco, California)
 Stearns, A. Bryce, Des Moines (Denver, Colorado)
 Stickler, Robert, Des Moines (Carlisle Barracks, Pennsylvania)
 Stitt, Paul L., Des Moines (Great Lakes, Illinois)
 Throckmorton, J. Fred, Des Moines (Camp Barkeley, Texas)
 Toubes, Abraham A., Des Moines (Greenville, Mississippi)
 Turner, Howard V., Des Moines (Camp Robinson, Arkansas)
 Updegraff, Thomas, Des Moines (Carlisle Barracks, Pennsylvania)
 Vaubel, Ellis K., Des Moines (Vancouver, Washington)
 Willett, Wendell M., Des Moines (Fort Bragg, North Carolina)
 Zarchy, Alex Z., Des Moines (Camp Lewis, Washington)
- Pottawattamie County
 Beaumont, Fred H., Council Bluffs (A.P.O., New York, New York)
 Cogley, J. Phillip, Council Bluffs (Fort Sam Houston, Texas)
 Dean, Abbott M., Council Bluffs (Pensacola, Florida)
 Hennessy, J. Donald, Council Bluffs (Chicago, Illinois)
 Howard, Lloyd G., Council Bluffs (El Paso, Texas)
 Hungerford, W. E., Avoca
 Jensen, Arnold L., Council Bluffs (A. P. O., San Francisco, California)
 Maiden, Synder D., Council Bluffs (San Francisco, California)
 Martin, Lee R., Council Bluffs (Burbank, California)
 Sternhill, Isaac, Council Bluffs (Fort Warren, Wyoming)
 Tinley, Robert E., Council Bluffs (A.P.O., New York, New York)
 Treynor, Jack V., Council Bluffs (South Bend, Indiana)
 Wieseler, R. J., Avoca (McChord Field, Washington)
 Wurl, Otto A., Council Bluffs (Camp Claiborne, Louisiana)
- Poweshiek County
 Brobyn, Thomas E., Grinnell (San Jose, California)
 Hickerson, Luther C., Brooklyn (Santa Ana, California)
 Niemann, Theodore V., Brooklyn (Camp Shelby, Mississippi)
- Ringgold County
 Seaman, Charles L., Mount Ayr (Van Buren, Arkansas)
- Sac County
 Bassett, George H., Sac City (San Diego, California)
 Deters, Donald C., Schaller (A.P.O., New York, New York)
 Neu, Harold N., Sac City (Jefferson Barracks, Missouri)
- Scott County
 Bishop, James F., Davenport (A.P.O., Seattle, Washington)
 Block, Lawrence A., Davenport
 Boden, Worthy C., Davenport (Biloxi, Mississippi)
 Christiansen, Charles C., Dixon (A.P.O., San Francisco, California)
 Evans, Harold J., Davenport
 Gibson, Preston E., Davenport (Vancouver, Washington)
 Hurevit, Hyman M., Davenport (Denver, Colorado)
 Kimberly, Lester W., Davenport
 LaDage, Leo H., Davenport (Camp Campbell, Kentucky)
 Marker, John I., Davenport (Omaha, Nebraska)
 McMeans, Thomas W., Davenport
 Neufeld, Robert J., Davenport
 Sheeler, Ivan H., Davenport (Omaha, Nebraska)
 Sorenson, Aral C., Davenport (Mare Island, California)
 Weinberg, Harry B., Davenport (Fort Benning, Georgia)
 Zukerman, Cecil M., Bettendorf
- Sioux County
 Gleysteen, Rodney R., Alton (Camp Elliott, California)
 Larson, Marvin O., Hawarden (Camp Robinson, Arkansas)
- Story County
 Rosebrook, Lee E., Ames
 Thorburn, Orval L., Ames (Las Vegas, Nevada)
- Tama County
 Boller, Gallen C., Traer (A.P.O., New York, New York)
 Dobias, Stephen G., Chelsea (Fort Greeley, Alaska)
 Haylik, Al J., Tama (Mare Island, California)
 Roberts, Charles R., Dysart
 Schaeferle, Lawrence G., Gladbrook (Fort Leonard Wood, Missouri)
 Standefer, Joe M., Tama (San Diego, California)
- Taylor County
 Hardin, John F., Bedford
- Wapello County
 Brentan, Emanuel, Ottumwa (Moline, Illinois)
 Brody, Sidney, Ottumwa
 Prewitt, Leland H., Ottumwa
 Selman, Ralph J., Ottumwa (El Paso, Texas)
 Struble, Gilbert C., Ottumwa (Fort Harrison, Indiana)
- Warren County
 Trueblood, Claire A., Indianola
- Washington County
 Droz, A. Keith, Washington (Great Lakes, Illinois)
 Mast, Truman M., Washington (Great Lakes, Illinois)
 Ware, Stephen C., Kalona (Camp Grant, Illinois)
- Wayne County
 Hyatt, Charles N., Jr., Humeston
- Webster County
 Baker, Charles J., Fort Dodge (Camp Claiborne, Louisiana)
 Burch, Earl S., Dayton (Camp Livingston, Louisiana)
 Coughlan, Charles H., Fort Dodge (Jefferson Barracks, Missouri)
 Joyner, Nevill M., Fort Dodge (Brooklyn Field, Alabama)
 Larsen, Harold T., Fort Dodge (Newport, Rhode Island)
 Shrader, John C., Fort Dodge (Fort Douglas, Utah)
 Thatcher, Orville D., Fort Dodge (Williams Field, Arizona)
 Thatcher, Wilbur C., Fort Dodge
- Winneshiek County
 Fritch, Arthur F., Decorah (Oahu, Hawaii)
 Hoscoda, Leonard J., Ridgeway (McChord Field, Washington)
 Larson, Lester E., Decorah
 Van Besien, George J., Decorah (Fort Leavenworth, Kansas)
- Woodbury County
 Bettler, Philip L., Sioux City
 Blackstone, Martin A., Sioux City
 Cmeyla, Patrick M., Sioux City (A.P.O., San Francisco, California)
 Crowder, Roy E., Sioux City (San Diego, California)
 Donohue, Edmund S., Sioux City
 Elson, Veryl J., Danbury (A.P.O., Seattle, Washington)
 Frank, Louis J., Sioux City (Mare Island, California)
 Grossman, Milton, Sioux City (Hobbs, New Mexico)
 Honke, Edward W., Sioux City
 Knott, Robert C., Sioux City
 Krigsten, William M., Sioux City (Springfield, Missouri)
 Lande, Jacob N., Sioux City (Whalley, England)
 Mugan, Robert C., Sioux City (Gowen Field, Idaho)
 Rarick, Ivan H., Sioux City (Soquel, California)
 Schwartz, John W., Sioux City
- Worth County
 Osten, Burdette H., Northwood
 Westly, Gabriel S., Manly (Fort Leonard Wood, Missouri)
- Wright County
 Aageson, Carl A., Dows
 Doles, Emmet A., Clarion (Phoenix, Arizona)
 Missildine, Whitney H., Eagle Grove (A.P.O., San Francisco, California)

SPEAKERS BUREAU ACTIVITIES

FALL POSTGRADUATE MEDICAL COURSES

The Speakers Bureau is pleased to announce its postgraduate medical activities for the fall months. In September the Hardin County Medical Society continues its series of regular monthly lectures, the Tama and Jasper-Poweshiek Societies resume their postgraduate medical meetings and new courses will be opened by the Wapello County Medical Society and the Northwest Iowa group. Listed below are the September lectures in chronologic order. Note the dates and locations of the meetings and plan now to attend at least one lecture during the month.

RECORDED POSTGRADUATE MEDICAL COURSE

Another recorded postgraduate medical course has been arranged by the Speakers Bureau. The lectures will be presented at the meetings of the Wayne County Medical Society in Corydon on the second Tuesday of each month. A series of ten lectures has

been set up with one of the recordings from our library of scientific transcriptions scheduled for each month.

RADIO SCHEDULE

WSUI—Wednesdays at 10:00 a. m.

WOI—Wednesdays at 2:05 p. m.

September 2	High Blood Pressure	Edward W. Anderson, M.D.
September 9	Nervousness	Kenneth K. Hazlet, M.D.
September 16	Abdominal Pain	Sidney D. Martin, M.D.
September 23	The Control of Cancer	James C. Hill, M.D.
September 30	Early Danger Signals in Heart Disease	Maurice J. Rotkow, M.D.

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF SEPTEMBER

Grinnell Hotel Monroe 6:30 p. m.	September 8	Treatment of Common Diseases of the Eye James A. Downing, M.D., Des Moines
Ottumwa Hotel Ottumwa 6:00 p. m.	September 8	The Sulfonamides Alexander E. Brown, M.D., Rochester
Sheldon Arlington Hotel 6:30 p. m.	September 15	Acute Abdominal Emergencies Howard I. Down, M.D., Sioux City
Ottumwa Hotel Ottumwa 6:30 p. m.	September 22	Indications for Cesarean Section William F. Mengert, M.D., Iowa City
Tama King Tower 6:30 p. m.	September 24	Clinicopathologic Conference Richard F. Birge, M.D., Des Moines
Iowa Falls Princess Cafe 6:30 p. m.	September 29	Sulfonamide Drugs John C. Parsons, M.D., Des Moines
Sheldon Arlington Hotel 6:30 p. m.	September 29	The Management of Acute Cardiac Failure Daniel J. Glomset, M.D., Des Moines

SCIENTIFIC RECORDINGS SCHEDULED FOR THE MONTH OF SEPTEMBER

Wayne County Medical Society Corydon—8:00 p. m.	September 8	The Diagnosis of Poliomyelitis John A. Toomey, M.D., Cleveland
Cass County Medical Society Atlantic—6:00 p. m. Atlantic Hospital	September 10	The Diagnosis and Treatment of Anemia Raphael Isaacs, M.D., Chicago

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

OUR SERVICE TO SOCIETY

The following article formed the inner pages of the national program booklet:

"An army is sustained by the fires of its spirit. A free citizenry lives in the light of its freedom, and spurred by that spirit strives for a greater realization of the opportunities which freedom offers.

"The patterns of our individual lives are largely determined by those things which we value and seek to hold. The zeal with which we strive for them is in proportion to how dearly we hold them. Some basic liberties won by our ancestors have been ours to enjoy for so long that we may now fail to measure their values or the possibilities of their loss . . .

"Women may give an immeasurable service to society by assisting in maintaining a high level of public morale—a morale based upon a common effort and faith, but with a determination to preserve freedom of spirit and the dignity of the individual and his life; to assure freedom . . . in matters peculiarly his own spiritually, socially, and physically. In supporting the public morale the nation likewise will be strengthened. A high morale is the most efficient armament, and no guardian is so valiant as he who defends the nation which protects him and permits to him the greatest measure of individual freedom from political domination . . .

"The women of your group are a part of a profession dedicated to the welfare of mankind. A high morale is necessary to that welfare—an opportunity to serve, an intangible, but the most enduring of all forces of the yesterdays, todays, and tomorrows yet to come."

Roscoe Senenich, M.D., South Bend, Indiana
Advisory Council of the Woman's Auxiliary
to the American Medical Association

PRESS AND PUBLICITY COMMITTEE

The following women comprise the 1942-1943 Press and Publicity Committee of the Woman's Auxiliary to the Iowa State Medical Society:

Mrs. Keith M. Chapler of Dexter, chairman; Mrs. Andrew I. Reed of Estherville, Mrs. Paul F. Chесnutt of Winterset, Mrs. Russell C. Doolittle of Des Moines and Mrs. Frank P. McNamara of Dubuque.

BOOK NOTES

Occasionally we discover an account of how contagious diseases were handled many years ago and are decidedly startled at some of the methods used. We usually do not think of Boston in 1764 as being particularly advanced, and yet the following account of how an epidemic of smallpox was cared for has many aspects which reflect a modern tone. We quote from the excellent biography by Esther Forbes, *Paul Revere and the World He Lived In*.

"Ten days before Paul Revere had appeared before the selectmen (as the law required and their records show), one of his children had smallpox.

"The selectmen argued with Revere. They wished the child to be removed to one of the dreary pest-houses (often little more than an abandoned dwelling), away from the center of the town. Revere refused. He loved his children—'his lambs,' as he called them. A visit to a hospital in those days was too often fatal. They could not 'prevail upon him'. So it was ordered that a flag be hung in front of his house. Moreover, a guard would be stationed. For this office any man who had had the malady would suffice. They chose Nicholas Murphy. Unlike some of the really wild Irishmen arriving in Boston at the time, Mr. Murphy could read, for they gave him his instructions in writing.

"Revere went back to the house by the wharf. Now the family was locked in upon itself. For the next month his ledgers show no orders. Whether the disease, probably the most contagious of all diseases, stopped with one child or went through the entire family, is not known. But none of them died.

"By the third of March it was everywhere, and all who might were fleeing to the country. Night and day the carts rumbled out of town as 1,537 people abandoned their trades and houses, struggling to get out of the infested town. John Boyle says there will be a total stop in trade 'until the distemper has gone through the town'. The selectmen now decided to grant 'liberty to the inhabitants to inoculate their families!'

"Vaccination, which finally defeated this ancient terror of mankind, had not yet been discovered. The inoculation for which Dr. Boylston and Mr. Mather had fought and nearly died during the great epidemic

of '21 and which the selectmen were now ready to risk, was dangerous, not only to the individual, but to the community. 'Venom' was taken from 'the best sort of smallpox', as much as would lie on the point of a needle, and put directly into an open wound. In this way a light case usually developed, which was, however, real smallpox and exactly as contagious. The patient was soon up and about with as complete immunity as though he had had it 'in the natural way'. The selectmen's decision to permit wholesale inoculation was a dangerous one, but Boston was ready for experimentation in politics, trade or hygiene.

"At the end of June, the epidemic was under control. The selectmen were justified in their decision and gave their figures: 4,977 people had taken smallpox by inoculation, of whom 46 had died; 699 had had it 'in the natural way', and 124 had died. The Reverend Cotton Mather and Dr. Zabdiel Boylston had not lived in vain."

Among other books worthy of attention are two titles concerning medical history which provide fascinating reading: *Modern Medicine* by N. W. Wilson and Dr. S. A. Weisman and G. W. Gray's *The Advancing Front of Medicine*. The first of these titles is especially recommended to those contemplating a medical career, in that particular emphasis is placed on unsolved problems and opportunities.

While *Magic in a Bottle* by Milton Silverman is not a new book, it is certainly one to back-track and read if one has missed it. Concerned with the discovery, preparation and use of modern drugs such as quinine, digitalis, sulfanilamide, etc., the book reads like an adventure novel.

Mrs. K. M. Chapler

CHANGES OF ADDRESS

Many changes of address are being made recently due to physicians entering military service. If your address for receiving the reprint of the Woman's Auxiliary News should be changed, will you please notify the office of the JOURNAL of the Iowa State Medical Society, 505 Bankers Trust Building, Des Moines, Iowa?

SPEAKERS BUREAU RADIO SCHEDULE

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WOI—Wednesdays at 2:05 p. m.

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|--------------|---------------------------------------|--------------------------|
| September 2 | High Blood Pressure | Edward W. Anderson, M.D. |
| September 9 | Nervousness | Kenneth K. Hazlet, M.D. |
| September 16 | Abdominal Pain | Sidney D. Martin, M.D. |
| September 23 | The Control of Cancer | James C. Hill, M.D. |
| September 30 | Early Danger Signals in Heart Disease | Maurice J. Rotkow, M.D. |

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Board of Trustees

August 19, 1942

The Board of Trustees of the Iowa State Medical Society met in the central office Wednesday morning, August 19, 1942, at ten a. m. Present were Drs. O. J. Fay, J. I. Marker and M. C. Hennessy of the board; Dr. R. L. Parker, secretary, and Dr. C. G. Smith of the State Department of Social Welfare.

Minutes were read and approved and bills authorized; committee appointments were made to fill vacancies created by physicians leaving for service; the resignation of Miss Stewart as assistant to the editor was accepted, Mrs. Dolk was appointed to fill the position and Miss Jensen was named secretary of the Speakers Bureau Committee; a publicity plan for better public relations was discussed but left to the discretion of the county medical societies; a check was made of the bonds of the State Society; and the meeting adjourned at noon.

Meeting of the Special Committee to Investigate a Medical Prepayment Plan

August 12, 1942

The special committee appointed by Dr. Winkler to investigate a medical care prepayment plan and make recommendations concerning the adoption of such a plan by the Iowa State Medical Society was called to order by Dr. W. C. Goenne, chairman, at ten o'clock Wednesday morning, August 12, 1942, at Hotel Fort Des Moines. The following physicians were present: W. C. Goenne of Davenport, R. D. Bernard of Clarion, E. E. Shaw of Indianola, M. I. Olsen of Des Moines and J. E. Reeder of Sioux City, committeemen; L. A. Coffin of Farmington, L. R. Woodward of Mason City, A. L. Jenks, R. L. Parker and J. E. Dyson of Des Moines and Mr. Miller of the American Medical Association.

Mr. Miller presented a summary of the various prepayment plans now in operation, all of which showed a tendency to lapse from a full coverage to a limited coverage or surgical coverage plan. The cost of complete medical coverage averages \$84.00 a year, and that is exorbitant; the result is that most plans limit the service to bring the cost within the range of more people. The committee discussed the wisdom of starting such a plan in Iowa, and after a prolonged discussion, voted to have Mr. O'Brien and Dr. Bernard prepare an enabling act which would be presented to the next legislature if it meets with the approval of the Executive Council. The committee also voted to recommend for the consideration of the State Society a medical and surgical non-profit service plan. Mr. Miller stated he would send copies of existing plans to the members of the committee for their study, and it was decided the committee should meet again about September 15 to draw up its own scheme of operation. Meeting adjourned at three p. m.

SOCIETY PROCEEDINGS

Black Hawk County

A special meeting of the Black Hawk County Medical Society was held in Waterloo Tuesday noon, July 28. This meeting was called instead of the regular monthly meeting and Colonel John I. Marker, M.C., of the Medical Officer Recruiting Board for Iowa, discussed the procurement and assignment service.

The September meeting of the Society will be held in Waterloo Tuesday, September 15, at Black's Tearoom at 6:30 p. m. Dr. Benvenuto Dino y Regidor of Manilla, now in Washington, D. C., will talk on a medical subject and also relate some of his experiences incident to his escape with President Quezon's party from Corregidor.

Craig D. Ellyson, M.D., Secretary

Dallas-Guthrie Society

The Dallas-Guthrie Medical Society met in Perry Thursday, July 16. Following dinner Frederick W. Mulsow, M.D., of Cedar Rapids discussed Frequency and Diagnosis of Common Diseases of the Intestinal Tract and Colonel Robert S. Shane, director of the Selective Service Board, Des Moines, presented a discussion of War Problem Relations. A special medical advisory committee for Guthrie County was appointed by Dr. Charles A. Nicoll, president, to act as an advisory council for the county public health nurse. The committee members appointed are: Dr. Marion H. Brinker, Yale; Dr. William V. Thornburg, Guthrie Center; and Dr. Elbert T. Warren, Stuart.

Greene County

The regular monthly meeting of the Greene County Medical Society was held in Jefferson Thursday, August 13. Dwight C. Wirtz, M.D., of Des Moines was the guest speaker for the evening and spoke on The Kenny Treatment of Poliomyelitis. His talk was supplemented with moving pictures showing the results obtained by this method of treatment.

J. R. Black, M.D., Secretary

Hardin County

The Hardin County Medical Society entertained George E. Mountain, M.D., of Des Moines as guest speaker at its regular monthly meeting in Iowa Falls Tuesday, July 30. Dr. Mountain discussed Heat Exhaustion and Sunstroke.

Marion County

At the August meeting of the Marion County Medical Society tribute was paid to Dr. Frank E.

Burbank of Pleasantville for his sixty years of service in the medical profession. Dr. Edward P. Bell, president of the society, presented Dr. Burbank with his certificate of membership in the Fifty Year Club.

Wayne County

The regular monthly meeting of the Wayne County Medical Society was held in Corydon Tuesday, August 11. The program for the evening consisted of a recorded lecture on Chest Injuries by Jerome R. Head, M.D., assistant professor of surgery, Northwestern University Medical School, Chicago.

PERSONAL MENTION

Dr. Frederick A. Hecker, pathologist at St. Joseph Hospital in Ottumwa, has opened an office in downtown Ottumwa for the general practice of medicine. He will remain at his hospital position mornings and spend afternoons and evenings in his office.

Dr. Chester L. Putnam of Manchester has been appointed director of local health services for the Iowa State Department of Health, effective September 1, 1942. He succeeds the late Dr. Marvin F. Haygood.

Dr. Thorald E. Davidson of Mason City took office in July as district governor of Rotary International, after being unanimously elected at the Rotary convention in Toronto, Canada. Dr. Davidson plans to devote much of his time during his year in office to visiting the Iowa Rotary Clubs. On July 24 he spoke before the Rotary Club of Indianola.

Dr. Hiram L. Youtz, formerly of Stratford, has located in Webster City where he is taking over the practice of Dr. William B. Lewis, who recently went into military service.

Dr. Leo H. LaDage of Davenport spoke before the Davenport Exchange Club at its noon meeting Friday, August 7. Dr. LaDage chose for his subject, Exposing Some of the Myths About First Aid.

Dr. Leo J. Homan, who has been practicing in Riverside for the past five years, has recently located in Clear Lake, where he will continue the general practice of medicine.

Dr. Adolph Soucek has been appointed superintendent of the State Hospital in Mt. Pleasant and succeeds Dr. Leonard P. Ristine, who recently went into military service and is now stationed in Sioux Falls, South Dakota. Dr. Soucek has been assistant superintendent of the Cherokee State Hospital for the past four years.

Dr. Donald M. Harris of Le Mars spoke on Work of the State Department of Health at the meeting of the public health nursing council for Pocahontas County Thursday, July 23, in Pocahontas.

Dr. David M. Nyquist of Eldora announces the association of his son-in-law, Dr. John J. Shurts, with him in the practice of medicine and surgery. Dr. Shurts was graduated in 1941 from the State University of Iowa, College of Medicine, and has recently completed an internship in Mary's Help Hospital in San Francisco. He is a First Lieutenant in the Medical Reserve Corps of the United States Army and expects to be called to duty in the near future. Until that time, however, and after the war, Dr. Shurts will practice in Eldora.

Dr. James T. McConnaughey, who has practiced in Mt. Pleasant for the past several years, has been appointed to the medical and surgical staff of the Iowa Ordnance Plant at Burlington, Iowa.

Dr. Vernon S. Downs of Ottumwa spoke on First Aid before the Kiwanis Club of that city Monday evening, August 17.

Dr. Edmund G. Zimmerer of the State Department of Health was guest speaker at the Guthrie County home nursing picnic Wednesday, July 29. He chose Cancer Control as his subject for the afternoon.

Dr. David O. Holman, formerly of Mason City, has moved to Rockford, Illinois, where he has accepted a position as pathologist in the Rockford Hospital.

Dr. Julia Cole has announced her association with the McFarland medical office in Ames. Dr. Cole is now located at the McFarland building and will continue the practice of internal medicine with special attention to allergic problems.

Dr. Charles W. Keith has located in Strawberry Point where he will continue his practice of medicine and surgery. Dr. Keith was located in Edgar, Nebraska, for several years prior to moving to Strawberry Point.

Dr. Fred A. Bowman of Leon spoke before the Rotary Club of that city Monday, July 20, on Community Service.

MARRIAGES

Miss Alice Marie Kline, daughter of Mr. and Mrs. Ray Kline of Knoxville, and Dr. James W. Agnew of Iowa City were married Tuesday, July 21, in Cedar Rapids at the home of the bride's uncle, Dr. Waldo E. Peschau. They are making their home in Iowa City where Dr. Agnew is a resident on the surgical staff at the State University of Iowa, College of Medicine.

Miss Priscilla Imlay, daughter of Mrs. Leta Imlay of Black Earth, Wisconsin, and Dr. Richard E. H. Phelps, formerly of State Center, were married Friday, July 24. Dr. Phelps is now in military service and is stationed at Fort Baker, California, as a first lieutenant in the medical corps of the 56th Coast Artillery.

Miss Madeline Seger, daughter of Mr. Frank J. Seger of Earlville, and Dr. Claude B. Rogers of that city were married Wednesday, July 29, at the Little Brown Church at Nashua. The couple will reside in Earlville where Dr. Rogers has been practicing for several years.

DEATH NOTICES

Anderson, Albert A., of Los Angeles, California, aged eighty-four, died July 27 after a four years' illness. He was graduated in 1882 from Rush Medical College, University of Chicago, and at the time of his death was a Life Member of the Polk County and Iowa State Medical Societies.

Davisson, Robert Rutledge, of Winterset, aged seventy-six, died July 28 following an illness of several months. He was graduated in 1890 from Rush Medical College, University of Chicago, and at the time of his death was a Life Member of the Madison County and Iowa State Medical Societies.

DR. CONZETT RECEIVES NEW APPOINTMENT

Dr. Donald C. Conzett of Dubuque has recently been appointed commanding officer of the Medical Officer Recruiting Board for Iowa with headquarters at 201 Federal Building, Cedar Rapids, Iowa. Major Conzett replaces Colonel John I. Marker, who has been given charge of operations and training for all Medical Corps personnel in the Seventh Service Command. Colonel Marker is stationed at 916 Federal Office Building, Omaha, Nebraska.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. PAUL E. GARDNER, New Hampton

DR. JOHN T. MCCLINTOCK, Iowa City

DR. HENRY G. LANGWORTHY, Dubuque

DR. WALTER L. BIERRING, Des Moines

Medical History of Floyd County

JAMES B. MINER, SR., M. D.

Charles City, Iowa

In reviewing the available records of the history of medicine in Floyd County, one cannot help wondering how the settlers managed so long with their herbs and poultices. The first reference of any medical or surgical case was in 1852 when two births were recorded, at which a Mrs. A. W. Storey acted as "doctress."

In March, 1868, a man by the name of Elder Buck, a bigamist from Wisconsin, appeared at Floyd, pretending to heal the sick, cure the blind, raise the dead, and perform other miracles by religious means. When his seances ended in a near riot and with a promise of his being tarred and feathered, he left for parts unknown.

Dr. Nathaniel Palmer came to Charles City in the fall of 1854 and was the first physician recorded in Floyd County. He was born in 1797 in Vermont, was a graduate of a York State College. He had practiced in Ohio and Illinois before locating in Charles City. History refers to him as a learned physician who was active in all civic matters, as well as a good doctor.

Dr. Lewis Birney located in Floyd Township in 1856. He was graduated from the College of Physicians and Surgeons in Toronto, Canada in 1851, and was a skillful surgeon. Being a pioneer physician, he had an extensive practice which covered a territory of approximately fifty miles.

Following is a partial list of the other early doctors in Floyd County with the date and place of their location:

1857 Dr. Joel W. Smith, Charles City.

1857 Dr. James Cartwright, Rockford. He was the first physician in Rockford and remained there three years, after which he located at Decorah.

1858 Dr. E. C. Kimball located in Rockford Township from Schullsburg, Wisconsin. After practicing there four years he moved to Chicago.

1862 Dr. N. J. McEwen and son located in Rockford.

1865 Dr. W. M. Palmer, Charles City.

1866 Dr. E. B. Haynes located at Marble Rock.

1868 Dr. Luther P. Fitch, Charles City.

1869 Dr. C. C. Birney and Dr. C. J. Clark located in Rock Grove Township. Dr. Clark later moved to Marble Rock.

1869 Dr. S. R. Hewett located in Nora Springs. He moved to Charles City in 1881.

1869 Dr. S. G. Blythe located in Rudd and then moved to Nora Springs in 1873.

1870 Dr. E. J. Williams was a resident of Charles City from 1870 to 1881, at which time he passed away at the age of 67 years.

1870 Dr. E. W. Nillem, Rockford.

1874 Dr. Ellis and Dr. J. D. McKenzie, Floyd Township.

1875 Dr. W. H. Nicklos, Rockford.

1877 Dr. M. E. Arkills, Rudd.

1879 Dr. S. P. Yeomans, Charles City.

1879 Dr. A. M. Brown, Rockford. After practicing there two years he moved to Marble Rock in 1881.

1880 Dr. T. D. Blythe, Rock Grove Township.

1881 Dr. Henry C. Aldrich, Charles City.

The following is a list of physicians who have practiced in Floyd County at one time or another. Every effort has been made to secure correct information for this list but it is practically impossible to obtain any degree of accuracy from the records of that time. The name, year of birth and location are given below:

Arkills, M. E.....	1826, Rudd.
Aldrich, H. E.....	1857, Charles City.
Braatz, Emile.....	1848, Charles City.
Amos, H. H.....	1860, Charles City.
Burnett, E. H.....	1855, Rockford.
Blythe, S. G.....	1841, Nora Springs.
Blythe, T. M.....	1857, Nora Springs.
Birney, L.....	1823, Floyd.
Birney, C. C.....	1848, Nora Springs.

Birney, E.....1856, Marble Rock.
 Brown, A. M.....1847, Rockford.
 Blodgett, M.....1837, Marble Rock.
 Brackett, A. R.....1858, Charles City.
 Burbank, F. E.....1857, Marble Rock.
 Brown, L.....1838, Rockford.
 Clayton, W. A.....1850, Marble Rock.
 Clark, C. J.....1835, Marble Rock.
 Cook, Albert.....1868, Charles City.
 Cooledge, James.....1859, Charles City.
 Dermendon, C. A.....1845, Charles City.
 Dales, John A.....1861, Marble Rock.
 Dougherty and wife.....In county.
 Fields, R. H.....1873, Rockford.
 Fitch, L. P.....Charles City.
 Frizelle, C. H.....1872, Rockford.
 Griffin, William L.....Charles City.
 Haynes, E. B.....1827, Marble Rock.
 Hewitt, S. R.....1836, Charles City.
 Hefflin, Frank.....1861, Nora Springs.
 Heiz, Emily J.....1863, Nora Springs.
 Hamilton, J. N.....1861, Charles City.
 Hummel, E. P.....1873, Charles City.
 Knickerbocker, C. W.....1855, Charles City.
 Kober, A. F.....1879, Charles City.
 Klinetop, W. B.....1859, Charles City.
 Lapps, D. G.....1856, Rockford.
 McKenzie, J. D.....1840, Floyd.
 McEwen, N. T.....1824, Rockford.
 Marchand, Mary L.....1838, Charles City.
 Miner, J. B.....1869, Charles City.
 Murphy, Garrett.....1850, Nora Springs.
 McCrav, J. W.....1857, Marble Rock.
 McCrav, W. R.....In county.
 McQuillen, C. W.....1886, Charles City.
 Newell, W. M.....1853, Charles City.
 Nichols, W. H.....1846, Rockford.
 Niemack, Julius.....1860, Charles City.
 Nienstedt, J. H.....1872, Rudd.
 Palmer, Nathan H.....1809, Charles City.
 Parker, J. L.....1864, Charles City.
 Pond, A. M.....1868, Marble Rock.
 Ramage, Charles.....1866, Charles City.
 Seymour, William.....1865, Charles City.
 Smith, Joel W.....1824, Charles City.
 Smith, I. W.....1852, Charles City.
 Shiff, M. J.....1849, Rudd.
 Scofield, F. L.....1838, Charles City.
 Simmons, F. W.....1857, Floyd.
 Stober, R. W.....1889, Charles City.
 Sitzer, C. D., electric healing, In county.
 Sowher, Elmer.....1855, Floyd.
 Stockdale, B. A.....1865, Charles City.
 St. Clair.....1835, Charles City.
 Stevens, G. M.....1870, Charles City.
 Shelton, E. L.....1846, Floyd.
 Von Berg, J. M.....1858, Charles City.

Williams, E. J.....1824, Charles City.
 Wilbow, E. M.....1845, Rockford.
 Waller, George H.....1845, Rockford.
 Worthington, H. C.....1860, Charles City.
 Woodruff, R. H.....1876, Charles City.
 Yeomans, S. C.....1823, Charles City.

Since 1917 the following physicians have practiced in Nora Springs: Drs. Banton, Bascom, Chenoweth, Holman, Mason, Rhoeba and Roack. During this time Drs. Lewis, Nash and Soper have practiced in Floyd.

At Rudd the following physicians have been located for the periods indicated:

Dr. French	1904-1919
Dr. Lata	1919-1920
Dr. Smith	1920-1921
Dr. Lacey	1921-1923
Dr. C. H. Cords.....	1923-1942

The first record obtainable of any medical society being formed in Floyd County was August 11, 1871, when a meeting was called by the profession in Charles City to organize a "medical association." This call was signed by Drs. J. W. Smith, L. P. Fitch, J. W. Nabersburg and E. J. Williams, all of Charles City. In response to this call their first meeting was held on September 22, 1871, in the Odd Fellows Hall. Those present included Drs. S. B. Chase, Osage, who was graduated from Bowdoin Medical College in 1849; J. W. Smith, Charles City, Yale Medical College, 1850; William S. Pitts, Fredericksburg, Rush Medical College, 1868; Henry W. Turner, Osage, Ohio Medical College, 1861; J. W. Nabersburg, Charles City, Iowa University, 1865; J. K. Gardner, Lawler, Michigan University, 1870; A. H. Wright, Dover, University of Michigan, 1870; J. L. Whitely, Osage, Rush Medical College, 1869; John G. Ogden, Mason City, New York City University Medical College, 1847; and L. P. Fitch, Charles City, College of Physicians and Surgeons, New York City, 1864.

It was finally decided to organize a district medical society. Drs. Smith, Turner and Pitts were appointed as a committee on permanent organization. This committee submitted the constitution and by-laws, which were adopted by the society. The name of the society was to be "The Upper Cedar Valley Medical Association," and it was to include the counties of Floyd, Mitchell, Howard, Chickasaw, Bremer, Butler, Franklin, Cerro Gordo and Worth. The first officers elected were: Dr. S. B. Chase, president; Dr. J. W. Smith, vice president; Dr. L. P. Fitch, secretary and Dr. William S. Pitts, treasurer. In 1872 the society held its first annual meeting in Osage, but after that all annual meetings were

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schaufler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

GYNECOLOGY AND FEMALE ENDOCRINOLOGY—By Emil Novak, M.D., associate in gynecology, The Johns Hopkins Medical School. Little, Brown and Company, Boston, 1941.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.

ENDOCRINOLOGY: CLINICAL APPLICATION AND TREATMENT—By August A. Werner, M.D., assistant professor of internal medicine, St. Louis University School of Medicine. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

VAGINAL HYSTERECTOMY—By James W. Kennedy, M.D., surgeon-in-chief to the Joseph Price Hospital, Philadelphia; and Archibald D. Campbell, M.D., assistant professor of obstetrics and gynecology, McGill University. F. A. Davis Company, Philadelphia, 1942. Price, \$10.00.

MANAGEMENT OF THE SICK INFANT AND CHILD—By Langley Porter, M.D., dean emeritus, University of California Medical School; and William E. Carter, M.D., director of University of California Hospital. Sixth edition. The C. V. Mosby Company, St. Louis, 1942. Price, \$11.50.

BOOK REVIEWS

THE TOXEMIAS OF PREGNANCY

By William J. Dieckmann, M.D., associate professor of obstetrics and gynecology, University of Chicago. The C. V. Mosby Company, St. Louis, 1941. Price, \$7.50.

Death from hemorrhage, infection and the toxemias of pregnancy is still the major hazard confronting the pregnant woman. Methods have been developed to lessen the risk from this latter complication of pregnancy, and a great deal of information has been accumulated in an effort to throw some light on the underlying cause or causes.

In this interesting, well-written text, Dr. Dieckmann first presents a classification of the toxemias. This is followed by a discussion of the pathology of eclampsia. The next section summarizes a tremendous amount of data covering the normal physiology of pregnancy and the disturbances in physiology and body chemistry associated with the toxemias. The present concept of the etiology of eclampsia is reviewed. Two sections of particular worth to the general practitioner and obstetrician are those setting forth the clinical aspects of the toxemias and the treatment of the toxemias. Chapters which appeal to the busy physician who wishes to keep abreast of modern obstetrics are signs and symptoms of toxemia, types of eclampsia, complications of toxemia, procedures and methods of treatment, the obstetric treatment of eclampsia and the nonconvulsive toxemias and maternal and fetal sequelae.

This is an excellent text and should be in the hands of every physician interested in obstetrics. The section on treatment is worth the purchase of the text.

A. W. B.

SURGERY OF THE AMBULATORY PATIENT

By L. Kraeer Ferguson, M.D., assistant professor of surgery, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1942. Price, \$10.00.

Dr. Ferguson and his associates have compiled a text which might well be accepted as a complete guide in any office or out-patient practice of surgery. Many men doing general practice may think that such a book is written only for the surgeon, little realizing how much of their work falls into the class of ambulatory surgery. Although any experienced surgeon will benefit from its reading, the book was written primarily for the general practitioner and the young surgeon. The fundamentals of the proper treatment of minor surgical conditions are the same as those in major surgery and such detail as to proper treatment cannot be overemphasized. The author has followed the principle that no surgical lesion is so minor that it is not deserving of our most detailed and often time-consuming attention.

Many conditions are covered in the book upon which surgery can be done in a well-equipped outpatient clinic but not in the average doctor's office; however, the author has written specifically of the

selection of patients and precautions and states that "ambulatory surgery should be safe surgery." When one realizes that probably 96 to 98 per cent of all industrial injuries are ambulatory, it is apparent that this volume should be reviewed by every young industrial surgeon. The chapters on the early treatment of contaminated wounds, burns, foreign bodies and musculoskeletal injuries, although brief, are most instructive.

The contents are divided into three parts: surgical principles and lesions, regional surgery and the musculoskeletal system. Such division of contents may cause some confusion in the repetition of certain general surgical lesions found also in regional surgery; however, the table of contents is complete and the book well indexed. The table of contents is further supplemented in a different manner by figures of the complete anatomy and skeleton inside the front flyleaf. The pages covering surgical lesions of soft tissues and musculoskeletal system are diagrammed as to specific anatomic locations. On opening the front cover, one can quickly find almost any subject desired. The book is profusely illustrated and the author is to be commended on the complete bibliography following each chapter, which gives one the opportunity for a complete review of any subject desired.

The tendency for all of us to attempt our very best in big things, and perhaps neglect little things is occasionally reflected in the practice of medicine. This volume on ambulatory surgery covers a field neglected by authors and at times neglected by the medical profession. Such a volume is deserving of our attention.

C. J. L.

THE NATIONAL FORMULARY, SEVENTH EDITION

Prepared by the Committee on National Formulary, by authority of the American Pharmaceutical Association. Official from November 1, 1942. Published by the American Pharmaceutical Association, Washington, D. C., 1942.

This is the new seventh edition of the National Formulary of Unofficial Preparations, which includes useful preparations not contained in the U. S. Pharmacopeia.

D. K.

IMMUNOLOGY

By Noble Pierce Sherwood, M.D., professor of bacteriology, University of Kansas. Second edition. The C. V. Mosby Company, St. Louis, 1941. Price, \$6.50.

This is a well-written textbook which was first published in 1935. This second edition is a complete revision, and new chapters on the reticulo-endothelial system and serum reactions have been added.

The subject matter covers the entire field of immunology. Although it is stated to be limited in its scope to material suitable for the perusal of medical students, it contains a wealth of practicable information which will be of interest to many physicians.

R. F. B.

A HANDBOOK OF OCULAR THERAPEUTICS

By Sanford R. Gifford, M. D., professor of ophthalmology, Northwestern University Medical School. Third edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942.

Dr. Gifford's book is a concise and modern work on ocular therapeutics which meets the needs of the busy practitioner. Here one receives the benefit of the thorough observations of a man who has access to much clinical material without having to go through much theory and statistical data. The author is open to conviction and ready to give any reputable therapeutic measure a fair trial; but, unlike many of us, he is conservative enough not to become too enthusiastic about a drug or procedure until it has proved its merit.

The new third edition has been brought up to date by a thorough discussion of the vitamins, sulfonamides and other recent therapeutic measures. For frequent reference, one should have a copy in his office as well as in his study.

S. A. B.

MEDICAL HISTORY OF FLOYD COUNTY

(Continued from page 442)

held in Charles City which was a more central location. In 1882 this society was still in existence and well attended with a membership of about twenty-five physicians and surgeons.

Floyd County has one of the best and most thoroughly equipped hospitals in the state. The Cedar Valley Hospital, which is located in Charles City is a forty-five bed institution with excellent laboratory facilities and equipment for the latest methods in deep therapy, radium, x-ray, surgical and medical treatment. It also has an isolation ward for contagious diseases.

The following doctors are at present in active practice in the county:

Winston C. Baltzell, Charles City (Now in military service at Fort Sam Houston, Texas)

Oscar H. Banton, Charles City

Floyd H. Fillenwarth, Charles City

Ray A. Fox, Charles City

Donald G. Mackie, Charles City

Charles W. McQuillen, Charles City

James B. Miner, Jr., Charles City

James B. Miner, Sr., Charles City

James E. Murtaugh, Charles City

Raymond W. Stober, Charles City

Hillard A. Tolliver, Charles City (Now in military service at Fort Cronkhite, California)

Norman C. Flater, Floyd

Laydon S. Wentworth, Marble Rock

Lewis A. Bascom, Nora Springs

Edmund Henely, Nora Springs

Russell A. Knight, Rockford

Charles H. Cords, Rudd

Henry W. Kruse, Rockford

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DES MOINES, IOWA, OCTOBER, 1942

No. 10

THE TREATMENT OF RAW SURFACES RESULTING FROM BURNS AND WOUNDS†*

SUMNER L. KOCH, M.D., Chicago, Illinois

I wish to discuss very briefly the principles involved in the treatment of raw surfaces resulting from burns and injuries. Those principles are simple, and they are not new; but they are often ignored in an effort to find new and better ways of treating open wounds.

For centuries surgeons have sought a magic preparation which could be applied to a raw surface and produce rapid healing. Too often they have failed to realize that the magic is in the tissues themselves, and that in the great majority of cases healing will take place rapidly if the natural reparative power of living tissue is not handicapped by adding further injury and by introducing infection.

Today we smile at the ignorance and credulity indicated by the formulae which the Egyptian phy-

sician of five thousand years ago used in the treatment of wounds. Perhaps five hundred years from now our successors will smile just as broadly as they trace our efforts to produce rapid healing of wounds by the application of chemicals which may handicap greatly the reparative power of living tissue and fail completely to destroy the bacteria which produce infection.

Four simple guiding principles in the treatment of raw surfaces are: not to add infection, not to add injury, to convert the open wound into a clean wound and to close the wound at the earliest possible moment that closure can be safely accomplished.

INFECTION

The infection which we fear comes, in the majority of cases, not from the object which caused the wound, not from the patient's skin or clothing, but from the open mouth and uncovered nose of the patient and, more often, of first aid workers, nurses, doctors—in short, of anyone who bends over the wound, talks into it or attempts to care for it without first masking himself. Hurredly cleansed hands, instruments hastily rinsed in an antiseptic solution and carelessly handled

*From the Department of Surgery, Northwestern University Medical School.

†Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.



Fig. 1. Result of application of grafts of intermediate thickness for flame burn of forearm.



Fig. 2. (a) Flame burns of both hands first seen three weeks after injury.

dressings are other important sources of wound infection.

In these days when Red Cross organizations are attempting to train many individuals in the care of wounds one would wish they would emphasize as the first and most important step in wound treatment the necessity of covering the open wound immediately with a clean dressing in order to protect it from the most important sources of wound infection, the uncovered mouth and nose of everyone nearby.

The Red Cross Manual states: "Whenever the skin of the body is broken, germs enter the wound. Heat, pain, swelling, redness and the formation of pus result. This is infection." It also states: "No matter how small the wound may be, it is always large enough for thousands of germs to enter. It is impossible to be accidentally wounded without large numbers of germs getting into the

wound . . . Other things being equal, the fewer germs in the wound, the less the danger of infection."

It does not say what surgeons have long believed, and what the investigations of Hare, Melaney and many other workers have demonstrated, that most of the organisms which are everywhere about us are harmless, and that the important sources of dangerous and tissue destroying infections are the respiratory and gastro-intestinal tracts of humans and of animals.

The most important step in preventing infection is not to apply iodine weak or strong, not to apply chemicals which may destroy living tissues, but to cover the wound immediately with a clean protective dressing held firmly in place with a compression bandage. Subsequently, when the protective dressing is removed and the wound cleansed, the patient and everyone working over him should be



Fig. 2. (b) Result of application of grafts of intermediate thickness after nine days of treatment to overcome infection.



Fig. 3. Result of immediate application of grafts of whole thickness skin to fill defects resulting from crushing injury. (Appearance of hand after injury is shown below.)

masked to prevent the access of the dangerous organisms from human mouths and noses.

INJURY

Mechanical injury is most often added to wounds by probing, by manipulation and by injudicious attempts to diagnose the extent of injury by examination of the wound rather than by careful observation and examination of the part distal to the wound. Chemical injury is most often added by attempts to sterilize the open wound with bactericidal agents without thought of their harmful effect on living tissue.

CONVERSION OF THE OPEN WOUND INTO A CLEAN WOUND

The simplest and most satisfactory method we know is gentle, patient and prolonged cleansing with plain white soap and sterile water, applied with "wash cloths" of soft sterile cotton and by hands covered with sterile gloves. Soap and water cleansing is followed by irrigation with warm sterile salt solution. With patience, gentleness and

thoroughness it should be possible to transform even a grossly contaminated wound into a clean wound if the patient is seen promptly after the injury. At such a time every quarter of an hour is precious, for when bacteria have once begun to invade the tissues such transformation is no longer possible.

CLOSURE OF THE WOUND

No one would argue against the immediate closure of an incision made for the repair of a hernia, or for the removal of an ovarian cyst. The complications which might follow such an omission are too obvious to mention. The same reasons which impel the surgeon to close with pre-



Fig. 3



Fig. 4. Extensive burn with loss of partial thickness of skin. (a) On admission; (b) After soap and water cleansing and excision of devitalized tissue; (c) On discharge from hospital, fourteen days after admission; burned area healed.



5 (a)

cision and care a herniotomy incision apply with equal force in the case of any recent wound if it has been converted into a clean wound.

How can one convert a large open wound with extensive loss of covering tissue into a closed wound? Perhaps it can be accomplished with a graft of intermediate thickness (Figures 1 and 2), or of whole thickness skin (Figure 3), at times with a sliding flap, or a flap from a distance. The larger the raw surface and the deeper the loss of covering tissue the more difficult the problem, but one must face the fact that unless the wound can be promptly closed infection is almost certain to intervene and be followed by the inevitable sequence of infection—long delay in healing, extensive contracture and too often serious impairment of function.

It is not necessary to repeat the details of technic involved in the transplantation of skin and subcutaneous tissue. Blair, Brown, Byars, Padgett, Harkins and many others have described clearly and depicted beautifully the methods of choice. The important thing I wish to stress is the principle involved, the fact that if one does not seize the psychologic moment—the few hours immediately after the injury—to accomplish clo-

sure of the wound, no care or skill or devoted attention at a later date may serve to compensate for the initial failure.

The problem of burns demands especial consideration, because in the treatment of the extensive open wounds which result from flame and scalding water it is not often possible to carry out the ideal treatment—removal of devitalized tissue and replacement. The other principles involved in the treatment of open wounds can be carried out and are just as definitely applicable as in the care of any open wound.

Prevention of infection by prompt covering of the open wound is the first step. Instructions in first aid care for burned British aviators now are: "Cover with clean linen; wrap in a blanket."

The second step is conversion of the open wound into a clean wound by soap and water cleansing. The patient and attendants are masked. The surgeon and his assistant wear sterile gown and gloves. The room is kept warm and draughts of cold air are avoided. Cleansing and removal of epithelium are accomplished with "wash cloths" of sterile cotton, plain white soap and an abundance of clean water. Sterile scissors and forceps are used to open blisters and cut away adherent



5 (b)



5 (c)



5 (d)



5 (e)

shreds of destroyed tissue. Finally, the injured area is well irrigated with warm salt solution. The whole process is rendered painless by the use of morphine or, for very young children, a barbiturate.

Closure of the large open wound is accomplished by applying smoothly over the cleansed injured surface fine-meshed sterile gauze saturated with petrolatum; over this several layers of sterile gauze are placed to absorb oozing serum; and then sterilized mechanics' waste or sea sponges are held firmly in place with an elastic bandage so as to provide smooth and uniform compression over the injured area. Nothing we have found is so helpful in arresting the loss of fluid from the injured surface and into the subcutaneous tissues as uniform compression over the burned area. If plasma loss can be prevented, the treatment of shock becomes a minor instead of a major problem.

The dressing so applied is reinforced with a splint and left undisturbed for ten to fourteen days unless signs of infection under the dressing necessitate examination of the wound. In ten or twelve days areas over which there has been only partial thickness destruction of skin should be healed. Separation of necrotic tissue remaining over areas where whole thickness destruction has occurred can be hastened by carrying out daily dressings once the primary dressing is removed, by cutting away obviously necrotic tissue with a sharp knife or scissors and by adding the solvent action of Dakin's solution to the dressings. The sooner the necrotic tissue can be replaced by healthy granulations (Figure 2) the sooner can the objective of wound closure, with the aid of skin grafts, be accomplished.

I have purposely avoided reference to the use

of sulfonamides, as suggested by Gower among others, partly because they already have so many protagonists, including powerful commercial interests, but chiefly because there is a real danger when so much emphasis is laid on chemotherapy that basic and fundamental principles will be ignored, and with unfortunate results. In spite of the undoubtedly value of the sulfonamides in controlling infection, many questions concerning their use are still unanswered: their local effect on healing of tissue; their possible toxic effects, and their action in patients sensitized by previous administration, to mention only a few. Recently a patient under our care became critically ill in a few days' time from the administration of small doses of sulfathiazole following removal of an infected bone plate. He had severe chills, a fever which reached 106 degrees, intense photophobia and diffuse dermatitis. The blood level did not exceed 1.5 milligrams per cent. The critical picture cleared up quickly when the drug was discontinued. Later we learned that he had been given sulfathiazole four months before, at the time the fractured humerus was plated.

Reports of renal complications following sulfonamide therapy are appearing in the literature in increasing numbers; and it must be remembered that the reported cases may constitute only a small percentage of those in whom complications have occurred. The simple fact that a sulfonamide should be sterilized before being used for local application has not been sufficiently emphasized. The suggestion that sterilization is a necessary safeguard may come as a surprise to men who have not given a thought to the source or method of handling the material they apply so freely in an open wound. If one assumes he can disregard sound and well established surgical principles be-



Fig. 6. Extensive burned area coagulated with tannic acid applied by members of fire department. Severe infection developed under the crusts; to remove crust and necrotic tissue, control infection and secure healing required six months' time. (a) On admission; (b) Appearance four days after application of skin grafts over large raw surfaces.

cause sulfonamides are now available, he is doomed to disappointment and disillusionment.

SUMMARY

The principles involved in the treatment of raw surfaces resulting from burns and wounds are simple but important. They are: protection of the raw surface from further contamination and further injury, conversion of the contaminated wound into a clean wound and closure of the wound at the earliest possible moment it can be safely accomplished.

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SYMPOSIUM ON THE USE OF THE SULFONAMIDES

USE OF THE SULFONAMIDES IN PNEUMONIA*

HERMAN J. SMITH, M.D., Des Moines

It is now five years since the sulfonamides first came into general use in medicine. Not since Paul Ehrlich has the chemical attack upon systemic in-

fection held such brilliant promise. It is proposed, in this symposium, to present the experiences of the Broadlawns Polk County Hospital staff with the better-known sulfonamide derivatives.

Five years ago the mortality of pneumococcus lobar pneumonia in the wards of the Broadlawns Hospital was 35 per cent. It must be remembered that these patients in general represent a poor-risk segment of the population.

In 1938, type-specific sera were generally adopted, with the result that the mortality dropped to 17.1 per cent. Two years later, with the use of sulfapyridine or sulfathiazole, the mortality was 8.5 per cent. At the same time, the average length of hospitalization dropped from 14.6 days to 7.0 days.

Sulfapyridine, sulfathiazole and sulfadiazine are the three sulfonamides now generally used in the treatment of pneumococcus pneumonia. Sulfapyridine causes the most toxic manifestations, and its use is now reserved chiefly for those patients who show an idiosyncrasy to, or poor results from, one of the other sulfonamide derivatives. Between sulfathiazole and sulfadiazine, there appears little to choose. Sulfadiazine is reported to be somewhat less toxic. On theoretic grounds it is preferable because less of the drug appears in the blood and urine in the conjugated form, because the acetylated or conjugated drug is more soluble in the urine and hence less likely to precipitate out in the kidney, and because it is excreted more slowly, so that it is easier to maintain an adequate blood level.

Sputum for typing and blood for culture should be obtained before the administration of the sulfonamide is begun, because serum therapy is often required in addition to sulfonamide administration. Typing may be unsatisfactory after chemotherapy has been started. Once the specimens

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have been obtained, one should institute chemotherapy without waiting for the laboratory report.

Whether sulfathiazole or sulfadiazine is used, it is our custom to give four grams of the drug as soon as a sputum specimen and blood culture have been obtained. We then administer one gram every four hours, day and night, until the temperature has remained normal for forty-eight to seventy-two hours. The average total dose is twenty-five to thirty grams. All Type III pneumonia patients should have serum in addition to chemotherapy, as soon as the typing is reported, and any patient who fails to show a satisfactory response to the sulfonamide within eighteen hours should likewise receive the indicated type-specific serum.

Toxic effects of the sulfonamides include skin rashes, drug fever, nausea, hemolytic anemia, leukopenia, peripheral neuritis, hepatitis and renal irritation. Such effects may be an indication for changing to another drug, or for abandoning sulfonamide therapy entirely in favor of type-specific serum. The blood and urine should be examined daily, and the urine output maintained at 1,500 cubic centimeters in twenty-four hours.

CASE REPORTS

A patient with Type II pneumonia was started on sulfathiazole without any effective response. The following day sulfathiazole was stopped and sulfapyridine was instituted. There still was no satisfactory response, and in twelve hours, 210,000 units of Type II serum were administered with a prompt decline in the temperature and an uneventful convalescence. A chest roentgenogram of this patient taken ten days later was practically normal. To me this is one of the most remarkable phenomena in medicine. We are all familiar with the rapid clearing of clinical symptoms after any patient with lobar pneumonia passes the crisis, but to see a practically complete resolution of the pathologic process as well as the clinical picture in ten days is an astonishing thing.

Another patient, a young boy, had a bronchopneumonia which we were unable to type. When sulfapyridine was begun, the red blood count was 5,100,000, the white blood count was 42,000 and the hemoglobin, 14.6 grams. Four days later the red count was down to 1,000,000, the white count had risen to 120,000 and the hemoglobin was 4.5 grams. This severe hemolytic anemia is one of the dangerous toxic effects from sulfapyridine administration. The patient was carried along on symptomatic treatment and gradually recovered. Ten months later this same boy had an appendiceal abscess complicated, after a very difficult anes-

thesia, with pneumonia. It will be recalled that he had previously developed a very pronounced hemolytic anemia from sulfapyridine within a space of four days. This time he was given sulfathiazole. His temperature, however, continued to rise. A Type XI pneumococcus was obtained from his sputum. He was given 100,000 units of type-specific serum and sulfathiazole was continued. His temperature dropped rapidly and he made an uneventful convalescence.

Thus, a change from one sulfonamide to another may occasionally be the solution when difficulties are encountered. The physician should always be alert to reinforce the drug, if necessary, with type-specific serum.

USE OF THE SULFONAMIDES IN INFECTIONS OF THE GENITO-URINARY TRACT*

WILLIAM R. HORNADAY, M.D., Des Moines

At present the treatment of genito-urinary infections is dominated by use of the various sulfonamides. Practically all types of infections of one form or another are now subjected to this mode of treatment. Even in urinary tuberculosis, where mixed infections occur, one of the sulfonamides is introduced as an aid in the care of these patients, often with much benefit. I would like to discuss briefly some of the impressions gained during the past few years which we have found to be important.

Let us mention first the elderly patient. More of these patients now come for treatment and still more will come in the future since the age level of this group is on an upward trend. The tolerance of an elderly patient for a small dosage of one of the sulfonamides compares favorably with that of the younger individual. Where a colon bacillus infection of the kidney and bladder exists, a small dosage of sulfanilamide proper, five to ten grains once or twice daily, helps to eradicate all signs and symptoms. Recurrent infection is to be expected from time to time, but this is true of any type of medication employed. Sulfanilamide, sulfathiazole and sulfadiazine are all well tolerated. One of the main difficulties we have had is persuading these patients to drink larger quantities of water. Many have been poor water drinkers for years and it is difficult for them to acquire this habit even for short periods of time. These patients must be watched closely, and in some of them at least the practice of taking a little soda is more closely observed than that of an in-

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creased fluid intake. Soda seems to be a part of the life of many aged patients; and it is tolerated very well by this group in spite of a decreased acid content of the stomach. This may be one of the reasons sulfonamides given by mouth are well tolerated in those of advanced years.

With respect to the treatment of coccal infections in the lower genito-urinary system, sulfapyridine, sulfathiazole and sulfadiazine have proved the most effective. Let us consider, for example, the gonococcal infection in the male. An acute infection in the average adult, weighing approximately 150 pounds, will be brought under control quickly with four grams of sulfathiazole daily, in divided dosage. An amount smaller than four grams daily is usually ineffective. Large dosage is unnecessary and fraught with danger of systemic reactions. With the larger and heavier dosage, there is a tendency to crystal formation in the urinary passages. Our experience has been that these patients must be watched closely in order to secure early and prompt control of their infection. This control is brought about more quickly with systematic measures of care and local treatment. We believe it is a mistake to attempt to cure a gonococcal infection with chemotherapy alone. Measures in guidance of habits and care, together with local medication, are necessary to bring about complete and lasting cure. If local measures in treatment are not employed, especially after the acute phase of infection has subsided, many of these patients will harbor a residual infection of the prostate gland. In other words, we believe complete reliance should not be placed upon the sulfonamides alone. The word "cure" should be used with caution and then only after a lapse of time and the use of provocative tests.

We are always concerned with the problem of the formation of crystals. During the past two weeks we have seen two patients develop urinary crystals. Each patient had been placed on the routine of four grams of sulfathiazole daily. In one patient, only an occasional urinary crystal was seen, but in the other there was a moderately heavy deposit of urinary chemical crystals. In both, acid reactions of the urinary specimens were noted. We have found this situation frequently, even though the patient may be on alkali medication at the time. This emphasizes to us that all patients who are under sulfonamide therapy should be watched closely and that the microscope should be used at least every other day to determine whether or not crystals are forming. Each and every one of us can carry out this test.

USE OF THE SULFONAMIDES IN DISEASES OF THE EYE, EAR, NOSE AND THROAT*

BENJAMIN F. KILGORE, M.D., Des Moines

The sulfonamides in the treatment of diseases of the eye, ear, nose and throat have been as effective in many conditions as they have in other branches of medicine.

In the therapeutics of the eye, these drugs have probably been most spectacular in the treatment of trachoma. Sulfanilamide and sulfathiazole have been shown by experimentation to penetrate the aqueous humor after oral administration, but sulfathiazole attains only a very small concentration, and is of little value in ocular infections. In numerous cases of long standing trachoma with marked pannus associated with photophobia, lacrimation and recurrent ulceration, the oral administration of sulfanilamide relieved the symptoms, improved the vision and made the patients comfortable for the first time in months or even years. Local administration in the form of a 2.5 per cent solution of neoprontosil dropped into the conjunctival sac three to five times a day has been recommended. We have not used it in many cases but the results have been very encouraging. Investigators differ in their results in the local application and some observe no improvement; but Cheney¹ believes that local instillation alone will effect a cure in the majority of cases if instilled often enough, and that oral administration is superfluous. In our experience it has been used in conjunction with oral administration, and only in ambulatory patients, so we are scarcely in a position to draw any definite conclusions. All stages of trachoma are benefited by this drug; the early stages may be arrested, the late stages greatly improved and infectiousness eliminated.

I recall at least two patients with third stage trachoma who had been unable to do any work for some time, and who unquestionably suffered great discomfort. They would report at regular intervals for copper stick treatment, suppress their agony following treatment, and when sufficiently recovered would be led home to await their next treatment. With the advent of sulfanilamide, their improvement was miraculous; and after a few months one man was happy to report he had a job and could support himself. The other was likewise able to follow regular work. Both of these patients were treated orally, before local instillation had been used.

Some observers have reported a transient myopia during sulfanilamide therapy. This was

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thought to be due to edema of the crystalline lens, but it disappeared after the drug was discontinued.

In gonorrhreal ophthalmia these drugs have been used with apparent success, administered both locally and orally. Mullen² considers the local instillations more important and effective than oral use; a 0.2 per cent solution of sulfathiazole is used every ten minutes for the first twenty-four hours, and then tapered off.

We have used sulfathiazole ointment locally in styes and purulent conjunctivitis, but our results have not been particularly impressive.

In otology, the sulfonamides have been used most successfully in the treatment of otitis media, and have undoubtedly inhibited the development of many cases of potential mastoiditis. Sulfathiazole has become the drug of choice since it is effective against streptococcus, pneumococcus and staphylococcus. The drainage period in cases of acute suppurative otitis is usually shortened with the use of the sulfonamides. The dosage varies with different individuals; some physicians recommend an initial dose of two grams followed by one gram every four hours. Chronic discharging ears do not respond well to the use of these drugs. Occasionally, however, the secondary infection can be controlled by their use.

In the nose the use of these drugs has been less effective. This may be due to inadequate differential diagnoses, since many chronic nasal and sinus diseases are basically allergic and will not respond to chemotherapy. In acute infections of the sinuses, especially empyema of the antra, the use of these drugs is beneficial when used in conjunction with local treatment and surgical drainage and irrigation of the infected antrum. In the relatively mild acute cases of rhinitis and ethmoiditis, the toxic effects of the drug usually make the patient more uncomfortable than the infection itself, and its administration does not materially shorten the course.

In acute infections of the throat, the use of these drugs should be governed by the individual case. In severe sore throats, such as acute follicular tonsillitis associated with chills, fever and general malaise, these patients are more uncomfortable after the administration of these drugs, and the course of the infection is not apparently changed in the majority of cases. During the past winter we had a number of patients who had made their own diagnosis of "strep" sore throat and had taken the drug because they had read about it in the paper, or a druggist had prescribed it, or occasionally on the prescription of their family doctor, and then complained that they became worse instead of better. In such cases the drug was stopped, the patient's throat was treated locally,

and he was given a combination of antipyretics, with or without codeine, which effected rapid recovery. In all of these throat infections, however, if the appearance suggested the possibility of a developing or possible peritonsillar abscess, sulfathiazole was given. In patients seen almost immediately after onset, the use of the drug was delayed for two or three days until the general symptoms had subsided. Then, if the throat had not shown proportionate improvement, the drug was administered and in this manner many cases of quinsy were undoubtedly avoided. Once an abscess has started to form, however, the use of these drugs will not preclude the need for surgical drainage.

In Ludwig's angina and abscesses of the tongue, pharynx and upper respiratory tract, sulfanilamide should certainly be used, although it often may be in conjunction with surgical drainage.

We must not overlook the use of sulfanilamide in erysipelas of the face. It is almost a specific, since the condition shows a constant and very striking response. The dose varies with the severity of the case, but fairly large doses should be used until the disease is under control; one gram every four hours for most adult patients.

CONCLUSIONS

The sulfonamides in diseases of the eye, ear, nose and throat have been most effective in trachoma, gonorrhreal ophthalmia and otitis media. They have been useful, but less effective, in acute conditions of the nose and throat.

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USE OF THE SULFONAMIDES IN DISEASES OF THE DIGESTIVE TRACT*

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The use of the sulfonamides in the treatment of diseases of the digestive tract cannot be adequately covered in five minutes so I will discuss two more specific phases. The first condition to be considered is that of non-specific ulcerative colitis. This disease has many therapies but no cures, and now another has been added to the list. These drugs have a definite place, but they should be used as an adjunct and not regarded as a cure. Of the group, one or two compounds are designated for the specific ulcerative lesions, but neoprontosil is about as useful as any for the non-specific type. We do not attempt to overwhelm the

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infections with large doses. The most satisfactory treatment we have found is that recommended by Dr. Bargen, who gives moderated doses in courses. We use from twenty to sixty grains a day and continue this treatment for eight to fourteen days. It is then repeated at intervals of two to three weeks. As I have said, this is added to other phases of good management, but it does not give us a cure. We find that it may lower the febrile reaction as well as lessen the bleeding. The question arises as to whether these results are accomplished by blood stream concentration or direct contact of the drug with the ulcerations in the bowel. Probably both are factors.

The second condition about which I wish to talk is pus infection which directly affects the digestive tract. Grossly there are two types. One is the infection which has gained headway in the abdomen before the institution of adequate treatment. A good example of this would be an appendical abscess or ruptured appendix. The use of the sulfo compounds in these cases is purely an associate and not the major portion of the treatment. Once these tissues have been injured because of infection, the resistance lowered and the circulation interrupted, the sulfo group does not restore the tissue. Surgery must be instituted with removal of infected material and adequate drainage of abscess cavities. In this type, use of the sulfo group may prevent spread of the infection, providing the circulation is partially intact.

In streptococcic infections of the abdomen with peritonitis, use of the sulfo group gives better results than surgery. Most of this is due to the specificity of the drug, but it may be partly because of the fact that the circulation is maintained which allows the sulfo group to reach the affected areas.

The second type of this condition, which I think is of probably more importance, is infection following surgery. The whole of the surgical field of resections is being revised because of the increase of latitude which use of the sulfo group gives in abdominal surgery. In these conditions I would point out that there is no interference of the circulation due to infection. The purpose of the drug is to prevent the bacteria from multiplying at the site of the operative lesion. In these cases, of course, the sulfanilamide is applied directly to the site in addition to oral or intravenous administration after surgery.

In closing I wish to point out that the results we can expect from the sulfo group depend not only upon the type of the infective organism but also upon the degree of tissue injury and the amount of circulation which is maintained in the affected part.

USE OF THE SULFONAMIDES FROM THE STANDPOINT OF HEMATOLOGY*

DIEDRICH J. HAINES, M.D., Des Moines

I wish to limit my discussion to the toxic manifestations of this disease in the blood. These drugs are all poisonous, toxic-producing substances. They are soluble in the blood and they circulate in the blood, so that they are in contact with all of the blood-forming organs, that is, the blood marrow and the blood cells themselves. The action of these drugs on the bone marrow is to suppress the production of the blood-forming elements. We see that the red cell production is depressed, and in addition to this an actual hemolysis of the red cells takes place. Toxic manifestations and anemia with sulfanilamide or sulfonamide therapy increase very rapidly because of the destruction of the red blood cells and the suppression of their production.

The formation of the white blood cells, especially of the neutrophils, that process we call myelopoiesis, also is suppressed in varying degree. The white blood cell count falls, and in severe toxic cases it falls to a very low level. In some individuals, and apparently in very few, the formation of the blood platelets is also interfered with and depression occurs. Such a case was recently reported in which an actual thrombocytopenic purpura appeared in the course of the sulfonamide therapy.

The appearance of the blood in toxic cases of sulfonamide therapy varies a great deal and many confusing pictures arise. We see a deepening anemia with pathologic blood regeneration. We see basophilic stippling in the red blood cells. We may even see nucleated red cells, depending on the degree and severity of the anemia. The white blood cells also show toxic changes, especially the neutrophils, and in them we may see basophilic granulation, a disproportion between the size of the nucleus and the amount of cytoplasm in the neutrophils. We may see the appearance of vacuoles in the neutrophils and we may see fragmentation of nuclei in grave cases. Of course, if the platelets are affected, we see no change in the individual platelets themselves. They simply disappear from the blood stream. We recognize gradations and severe toxicity by the degree of anemia, by the degree of leukopenia and by the degree of toxicity in the blood.

From the standpoint of preventing these changes, I think the most important thing is the

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daily study of the blood of patients who are receiving sulfanilamide drugs. The blood not only should be examined for red and white cell content, but an examination should be made to determine the degree or level of toxicity appearing in the neutrophils themselves; and if severe anemia, leukopenia or toxic changes appear, we must take into account whether or not we wish to withdraw or reduce the dosage of these drugs.

If we are faced with a serious lesion, which necessitates the use of sulfonamides, and if we are faced with severe toxic reaction in the blood itself, we have a difficult choice to make. I think many of us try to make this choice more or less as a compromise. We continue the sulfonamides, but we give blood transfusions; and of all the remedial agents for clearing toxicity in the blood, repeated transfusions are the best. We try to tide our patient over the most severe toxic phase and hope to overcome the condition for which the sulfonamide is given if we can. If grave changes appear, the drugs must be withdrawn.

I want to mention the delayed reactions which occur in the use of the sulfonamide drugs. Toxic changes sometimes appear in the blood stream two, three or four weeks after sulfonamide therapy. These, of course, cannot be prevented, because the damage has already been done. It is not advisable to dismiss a patient completely who has received sulfonamide therapy without examining his blood at intervals in the future. These lesions are rare, but they do occur and they are often serious.

There is one other special diagnostic procedure which can be done in those patients with delayed sulfonamide reactions, and that is the aspiration of the bone marrow. We get our best information as to the damage which has been done to the blood-forming organs by direct aspiration of the marrow and study of the marrow cells. If they are extensively damaged, the prognosis can be made accordingly.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

BRONCHIECTASIS

HARRY A. STRIBLEY, M.D., Dubuque

Until within the last decade, bronchiectasis was usually considered a progressive, chronic disease terminating fatally before the age of forty. With the demonstration of the value of iodized oil in the diagnosis of bronchiectasis and the development of lung surgery, the picture has changed

and the majority of patients with the disease can anticipate cures. The case to be cited had a characteristic clinical course over a period of six years. Several years before death, lobectomy had been advised but was refused. At the time of death, however, the condition was still operable.

CASE REPORT

Chief Complaint: The patient, a white man forty-four years of age, was admitted to the Finley Hospital June 26, 1942, at 2:15 p. m. because of "coughing up blood and pain on breathing, especially over the right chest."

Family History: The family history was negative for tuberculosis. His mother was alive but his father had died of an unknown cause.

Past History: Six years before admission the patient was treated in this hospital for influenza with bronchopneumonia on the right side. At that time bronchiectasis was also diagnosed by the roentgenologist (Figure 1). A year later he was readmitted and treated for an exacerbation of the lung symptoms, which improved. He also had symptoms of asthma and arthritis along with those referred to the lung. Since that time he had had frequent attacks, which apparently were the result of reinfection of the bronchiectatic cavities. He was a patient at the Hines Hospital for army veterans, and he was advised to have the lowest lobe of the right lung removed several years ago but this advice was rejected.

Present Illness: The patient had been sick for about one week with symptoms similar to those in previous attacks, and since there were some signs of pneumonia, he was sent to the hospital. He had been coughing up blood and had pain on breathing, especially on the right side.

Physical Examination: The patient was a white male who appeared very ill. The head was negative. The pupils were equal in size and reacted to light and accommodation. The nose, ears, buccal cavity and neck were negative. Expansion was limited on the right side of the chest, anteriorly and posteriorly. There was dulness over the right lowest lobe and up into the axilla, but above this area the lung was tympanitic. The left lower lobe was tympanitic at the base and in the axilla. Posteriorly, the breath sounds were barely audible over the lower lobe. Over the left base, the breath sounds were exaggerated and only sibilant râles were heard. Above this area there were fine crepitant râles. In the lower right axilla the breath sounds were very faint, but higher up a few sibilant and crepitant râles were heard. The heart was normal in size. There was a systolic murmur over the pulmonic area but this was probably functional. The aortic second sound was

greater than the pulmonic second sound but not markedly accentuated. The abdomen was tympanic and no masses were felt. The liver and spleen could not be felt. There was slight resistance in the upper quadrant of the abdomen. The genitals were negative. There was slight pitting of the ankles. The nervous system and mental condition were normal. The lymph nodes were not enlarged in any portion of the body.

Course in the Hospital: The patient was desperately ill and the pulse became irregular; the respirations, at first labored, later became rapid and weak. In spite of cardiac stimulation, the pulse became weaker and weaker, and the patient died approximately six hours after admission.

Clinical Diagnosis: Bronchiectasis of the right lowest lobe and pneumonia of the adjacent lung.

AUTOPSY ABSTRACT

Externally there was slight clubbing of the finger tips and there was evident loss of weight. The routine general examination was essentially negative except for slight cirrhosis of the liver. The left lung lay free in its cavity but the right was bound to the chest wall and diaphragm by dense fibrous adhesions, especially about the lowest lobe. On section, the left lung was irregularly congested and edematous but there were no areas of consolidation. The right lung was much heavier than the left. The upper two lobes were irregularly

congested and edematous. The lowest lobe was firm and had a rubbery consistency. On section, the lowest lobe was firm and there were numerous dilated bronchi and bronchioles containing purulent material (Figure 2). Surrounding the bronchiectasis, the lung was solid and in some areas showed pinpoint abscesses. In other portions, silvery gray streaks of organized lung could be seen. One calcified node was found on the right side but no satellite lesion was found in the pulmonary parenchyma. Microscopic studies confirmed the gross diagnoses. The anatomic diagnosis was as follows:

Primary: Bronchiectasis of the right lowest lobe; chronic and acute peribronchial pneumonitis with organization of the alveolar exudate and miliary abscess formation; right fibrous pleurisy; acute dilatation of the right side of the heart; acute congestion of all the viscera.

Subsidiary: Calcified hilic lymph node (right); slight chronic hepatitis; periaortic lymphadenitis; early atherosclerosis.

DISCUSSION

This case illustrates the clinical course of most cases of bronchiectasis, that is, recurrent exacerbations of the pulmonary symptoms with a gradual failure in health and a fatal termination of the disease within ten years of its onset. Until modern methods of diagnosis were developed the condition was considered rare, but it is now known to be one of the most common chronic affections of the lung. Indeed, many patients with bronchiectasis were formerly inmates of tuberculosis sanatoriums and many others went through life suffering from what was diagnosed as "chronic bronchitis." In 1922, Sicard and Forestier¹ announced the usefulness of iodized oil, which was radiopaque, as a means of outlining the spinal canal, bronchi and similar bodily structures, and its widespread use soon brought to light the frequency of bronchiectasis. The condition is now considered second to tuberculosis among chronic infections of the lungs.

In the majority of cases, the symptoms of bronchiectasis have their onset following some acute illness such as bronchitis, primary bronchopneumonia, lobar pneumonia, lung abscess, foreign body or bronchopneumonia secondary to measles, whooping cough or influenza. In some patients, however, the onset is insidious. Most cases are encountered in early life and practically all appear before the age of forty years. Thus, while infection is considered the most important factor in the production of bronchiectasis because of its frequency in early life, some believe there



Fig. 1. Roentgenogram showing dilated bronchi of the right lung after instillation of lipiodal (six years before death).

is a congenital type of bronchial dilatation. Ogilvie,² in an excellent discussion of the pathogenesis and etiology of the disease, admits such a possibility but states that no conclusive evidence of its existence apart from congenital cystic disease of the lung has been demonstrated. He emphasizes that aside from weakening of the wall due to inflammatory disease, the loss of the support of the air cushion of the lung as a result of atelectasis is another important factor in the production of the bronchial dilatation. Ogilvie classifies acquired bronchiectasis into two general types, the bronchogenic and atelectatic.

The diagnosis should be suspected in any patient with long continued or recurrent attacks of bronchitis and especially in those with histories of coughing up large amounts of purulent sputum. Not infrequently the sputum shows blood in small or large amounts. The history often indicates tuberculosis and in patients suspected of being tuberculous but whose sputa are negative for tubercle bacilli, it is well to consider the possibility of bronchiectasis. The diagnosis can be made by roentgenograms taken after the instillation of lipiodal into the bronchial tree. When the films are studied, it is very important that the extent of the involvement of the bronchial tree be determined. The findings will guide the thoracic surgeon in judging the amount of lung tissue to be removed if surgical treatment is decided upon.

The treatment may be by medical, bronchoscopic, radiation or surgical methods. All workers agree that some cases are cured spontaneously or by postural drainage supplemented by general supportive measures. It is also agreed that some cases are cured by bronchoscopic drainage and aspiration. Some are benefited by radiation. Most of these cases are early ones and those in which the changes in the bronchi are not irreversible. When the changes have become irreversible, such procedures are ineffective and give only temporary, symptomatic relief.

Formerly, when the condition had become chronic and affected the general health of the individual, it was considered more or less hopeless and in most instances the patients died after ten or fifteen years of chronic invalidism. With the development of thoracic surgery and the gradual reduction of the operative mortality rate for lobectomy so that it compares favorably with that of other types of major surgical operations, lobectomy has become the treatment of choice in properly selected cases. With adequate preoperative preparation, including postural drainage or bronchoscopic aspiration to render the bronchi free from as much acute infection as possible, the use



Fig. 2. Photograph showing dilated bronchi in lowest lobe of the right lung.

of controlled positive pressure anesthesia, the utilization of modern surgical technic and the intelligent direction of postoperative nursing, the operative mortality rate in unilateral lobectomy is between three and five per cent in the hands of skilled thoracic surgeons. Cures are obtained in about two-thirds of the cases. In bilateral bronchiectasis, the operative risk is increased and the chance of cure reduced. However, since death is likely to occur within ten years without operation, radical surgery should be seriously considered even in such cases.

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STATE DEPARTMENT OF HEALTH



COLONEL HUNT PLANS PLASMA AND SERUM DISTRIBUTION

On September 15 Colonel Wallace D. Hunt, Regional Medical Officer for Civilian Defense, Seventh Service Command, Omaha, visited Des Moines to confer with state officials regarding facilities for procurement and distribution of pooled normal human plasma and serum. Those participating in conferences held during the day included Walter L. Bierring, M.D., State Health Commissioner, Thomas A. Burcham, M.D., Des Moines, Chief of the Emergency Medical Service for Civilian Defense, and Elmer L. DeGowin, M.D., Iowa City, Field Consultant to the Blood Plasma Section of the National Office of Civilian Defense. Plans were formulated for the production of serum, plasma and whole blood, whereby facilities of the Serum Center of the Iowa State Department of Health and of blood banks associated with the various hospitals will be more closely interrelated and available for all civilian and war needs.

SERUM CENTER'S SERUM OR PLASMA BANK

Coincident with America's entrance into the war in December, 1941, facilities of the Iowa Serum Center were extended in order to procure and maintain an adequate supply of pooled normal human serum. The Serum Center, designated "The Civilian Defense Serum or Plasma Bank", works in cooperation with the Emergency Medical Service for Civilian Defense, hospitals, state and county medical societies, district, county and local health services, the United States Public Health Service, the American Red Cross, the armed forces and allied or voluntary agencies. The purpose and method of distribution of serum are as follows:

Aim:

(1) To place and maintain a supply of 60 units of pooled normal human serum in or near strategic areas. (The Red Cross unit is 250 cubic centimeters.)

(2) To keep hospitals and district health services supplied with such serum for civilian or war needs of emergency nature.

Serum Procurement and Distribution:

(1) Local agencies are requested to provide volunteer donors, each to contribute about a cupful or a half pint of blood. Bleeding clinics with from 20 to 60 donors are held in local hospitals, schools or other public buildings; several (preferably three) tables or hospital cots are required. Donors must be free from heart or kidney disease, active tuberculosis, malaria or syphilis. When in doubt regarding physical fitness, a physician should be consulted. Blood is donated without remuneration; and preliminary blood tests are not necessary. A donor may contribute blood repeatedly, at intervals of a month, without harmful effect.

(2) Representatives from the Serum Center of the Iowa State Department of Health are available to obtain blood at a designated time and place and take it to the Serum Center to be processed.

(3) Procedure: The donor's arm is cleaned with iodine and alcohol; a small amount of novocain is injected into the skin near an elbow vein; a needle is inserted and the blood drawn. The procedure is painless, except for a slight burning sensation at the time novocain is administered.

(4) Wassermann tests, blood typing and other tests are carried out on the serum of each donor before pooling. The processing of serum requires a period of two weeks. The finished product is returned as needed for emergency use to the community from which blood is obtained.

(5) The serum is dispensed in 500 cubic centimeter flasks, each complete with a venoclysis set. It is essential that all equipment be returned to the Serum Center in the original packing container in order to save buying new equipment.

(6) Pooled normal human serum, as kept in a hospital, may be used for any patient when the condition represents an emergency, such as when shock is present or imminent. When this serum is used for a civilian, it is understood that at least

five relatives or friends of the patient will volunteer as donors to replace each flask of serum used.

(7) Serum Report: Whenever serum is administered to a patient, it is urgently requested that the serum report form, enclosed with each package or unit of serum, be completed under direction of the attending physician and returned to the Serum Center, Iowa State Department of Health, Des Moines, Iowa.

OUTLINE FOR ORGANIZING AND CONDUCTING A STATE-WIDE IMMUNIZATION PROGRAM

JOHN M. HAYEK, M.D., Director

Division of Maternal and Child Health
Iowa State Department of Health

At a meeting of the Committee on Maternal and Child Health of the Iowa State Medical Society, held on March 3, 1939, the status of immunization, particularly against smallpox, was discussed. In view of the facts the committee voted to propose to the Iowa State Medical Society that it sponsor an annual program whereby the county medical societies simultaneously and for a specified period of time, carry out a state-wide plan for vaccination against smallpox. This proposal was adopted by the House of Delegates of the Iowa State Medical Society at its annual meeting in May 1939. In May of 1942 this committee and the House of Delegates again voted to sponsor the same program, but to include diphtheria, during the week beginning November 9, 1942.

A brief summary of the facts leading to this action show that:

1. In view of present knowledge and facilities, the incidence of smallpox in Iowa is excessively high. During the ten year period from 1932 to 1941, Iowa reported 7,077 cases as against 872 in New York and its five adjacent states, the total population of which is 13.5 times that of Iowa. In 1941 Iowa had 114 reported cases.

2. The only low points in the curve of smallpox annual incidence in Iowa coincide with the normal cycles expected of this disease.

3. The public, considering the state as a whole, voluntarily seeks vaccination only after the disease invades a community. This naturally leads to cyclic rises in smallpox prevalence.

4. The majority of immunization projects have been lay-sponsored and conducted in local communities or school districts in cooperation with the medical profession. This practice allows for a break in physician-patient relationship in order for children to receive advantage of offers made

at the time. This same situation is frequently met in border communities during a single county-wide program.

5. Reports of studies and surveys in schools and communities reveal that with but rare exceptions the per cent of the vaccinated population falls far below that estimated necessary to prevent a serious outbreak of smallpox. The percentage of protected children is especially low in the preschool age group.

6. The public as a whole is indifferent to the value and need for vaccination. This is enhanced by the low mortality rate of smallpox in recent years and an active opposition by groups opposed to immunization procedures.

7. Positive and active participation by organized medicine is needed to decrease the incidence of smallpox in Iowa.

8. Although the incidence of diphtheria is low, there are enough sporadic cases and small epidemics to make an immunized population necessary to prevent large scale outbreaks.

The plan includes the setting aside of a specified period of time during which the Iowa State Medical Society and its constituent county societies will sponsor a smallpox vaccination and diphtheria immunization program with the cooperation of the Iowa State Department of Health and other agencies interested in health. It is suggested that the following cooperative program be adopted:

1. The Iowa State Medical Society, empowered by its House of Delegates, will sponsor a state-wide immunization program by setting a period of time for the program; encouraging every county medical society to carry out the plan; releasing educational publicity; recommending local fee stipulations be made which will make the service available to as many people as possible; recommending preferred procedures through its Committee on Maternal and Child Health; recommending the opinion of its Committee on Maternal and Child Health that every effort be made to have treatments given in the office of the patient's physician of choice; and by seeking the cooperation of state-wide agencies interested in health.

2. County medical societies will determine the willingness of the society to take part; the fee to be paid the physician by those able to pay; arrangements for protection of the medically indigent; where services will be rendered; immunization procedures; type and content of publicity and educational program; and the local agent to act as distributor of vaccine and toxoid provided by the State Department of Health.*

3. Lay organizations interested in health promotion will be encouraged to provide for an intensive educational program; written consent of

parents, where done in groups; nursing and clerical help where needed; a determined effort through talks, distribution of literature and personal visits to parents to encourage treatment of infants and preschool children because of the greater susceptibility in those age groups; and accurate records of names, addresses and ages of those treated.

4. The Iowa State Department of Health agrees to furnish without cost the preventive agents for this program;* literature for distribution; certificates of immunity; record cards; and information on the status of smallpox and diphtheria. It also agrees to assist in enlisting the aid of lay groups; assist in educational activities and publicity; and arrange payment of a carrying charge to local druggists appointed by the county medical society to handle and dispense immunizing agents furnished by the department. This payment will be on the basis of ten per cent of the cost to the state.*

The purposes of this plan are two-fold: protection and education.

1. Experience in Iowa has shown that without special efforts a very small percentage of the population becomes protected against diphtheria and smallpox. On the other hand, when repeated local cooperative programs are offered, with their attendant publicity and organization, a community can be made safe from serious outbreaks. Experience of many other states shows that smallpox can be reduced almost to the vanishing point.

2. The plan opens an ethical means of publicity for education in the value of and need for immunization, and to create a normal demand for it. In the past, most physicians have not taken a positive, active public attitude on preventive procedures whereas opposition groups have vehemently and publicly condemned these practices, especially vaccination against smallpox. The rather widespread opposition to these treatments can only be overcome by education. This plan and its publicity with the public backing of the Iowa State Medical Society and its constituent county societies would have a beneficial effect in this direction.

Another factor which prevents many persons from being vaccinated is the memory of physical reactions following the use of old-time vaccines and methods. A state-wide demonstration of the safety and comparative lack of discomfort from the modern procedure will tend to remove this objection.

*Preventive agents will be furnished without cost only when ordered from the State Department of Health. If these are obtained from any other source, the State Department of Health cannot be responsible for their cost.

MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

The seventy-first annual meeting of the American Public Health Association will be held at Municipal Auditorium in St. Louis, October 27 to 30, 1942. Three general sessions will be held, the first to include an address by the Right Honorable Malcolm MacDonald, High Commissioner for the United Kingdom to Canada, Ottawa; the theme of the second session will be War and the Health Department.

Some of the many subjects to be presented at various sectional meetings are: The Sanitary Engineer in Civilian Defense; Present Status of Venereal Disease Control in the Army; Prostitution in the Spread of Venereal Diseases in an Army Containment Area; A Symposium on Industrial Hygiene and War; Tetanus Toxoid, Its Use in the U. S. Army; Vaccination Against Encephalitis; A Symposium on Milk and Dairy Products; The Hypothetical Relationship of Water Supplies to Poliomyelitis; Brucellosis; Army Water Supply Problems; A Symposium on Nutritive Values of Dried and Dehydrated Fruits and Vegetables; A Symposium on Tuberculosis; The Epidemiology of Streptococcal Infections; Immunization Against Scarlet Fever; Studies on Pertussis; Milk Laboratories in Defense Areas; and Epidemiology of Pneumococcus Pneumonia.

It is not often that the annual meeting of the American Public Health Association is held so near to Iowa; physicians, local health officers and laboratory workers would find attendance at the St. Louis meeting helpful and worthwhile.

PREVALENCE OF DISEASE

Disease	Aug. '42	July '42	Aug. '41	Most Cases Reported From
Diphtheria	18	1	8	Pocahontas
Scarlet Fever	46	37	31	For the State
Typhoid Fever	6	8	15	Polk
Smallpox	0	0	2	None
Measles	51	226	56	For the State
Whooping Cough ...	128	145	203	Des Moines, Dubuque, Linn, Polk, Washington
Brucellosis	39	41	27	For the State
Chickenpox	22	46	16	For the State
German Measles	0	3	4	None
Influenza	0	1	3	None
Malaria	0	1	8	None
Mumps	62	128	86	Dubuque, Greene, Story
Pneumonia	18	19	20	For the State
Poliomyelitis	16	6	6	Polk
Tuberculosis	68	147	64	For the State
Gonorrhea	119	130	129	For the State
Syphilis	237	256	188	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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IT WOULD HELP . . . !

With increasing speed now, the pattern of civilian medical practice as it will have to be conducted for the duration of the war begins to take shape. The prediction of a few months ago that the end of 1942 would see every physically able physician under forty-five years of age in military service is close to realization. Moreover, many physicians over that age have voluntarily sought service in the armed forces. As the need arises, still further demands will be made upon the dwindling stores of medical personnel to meet military needs. All this adds up to the inescapable conclusion that the supply of physicians remaining to care for the folks at home will be decidedly limited, not in number alone, but also in what might be called capacity for man-hours of work. Physicians, like ordinary human beings, possess no supernatural immunity to the physical incapacities which accompany advancing age; and many of the physicians out of the total number left for civilian service are decidedly in the age group subject to such incapacities.

It is doubtful, indeed, if the civilian population as yet has any real appreciation of the fact that its supply of medical service has already become sharply rationed. It should realize this fact, and it should take steps immediately to conserve this supply as it is being forced to conserve other supplies—notably rubber, gas and sugar. If John Q. Public does not know how this can be done, all he has to do is ask his home town physician or any other physician.

We have several suggestions along this line ourselves which we think should be brought to the attention of John Q. without further delay. One of the most important is that people should be

extremely careful to avoid disturbing the night's rest of the exhausted physician for anything but definite necessities. An unnecessary phone call after midnight or at five or six o'clock in the morning seriously cuts into the busy doctor's six or seven hours of sleep, which he sorely needs if he is to be at his peak of efficiency for the day's heavy load. To get him out of bed at night for an unnecessary house call is even worse. True, there are unavoidable and unforeseeable night emergencies to which doctors will gladly respond, as they always have, but it is a safe prediction that well over half of the night disturbances to which physicians are subjected could wait over the few hours until morning or could have been attended to the day before. Some of the coronary and other arteries which have been on the job for over half a century are bound to give way if the strain becomes too great. The public should conserve these arteries, and one way of doing it is to refrain from disturbing the doctor's sleeping hours unless an urgent situation develops.

Another way in which the public can help is to adopt the attitude of sacrificing their convenience to the convenience of the doctor instead of vice versa. Many people who work or who have something else to do during the day wait until evening or Sunday to call the doctor. Ambulatory patients should make the effort to see their doctor during his office hours. They should remember that a few hours of rest after a hard day's work are essential to the doctor if his physical well-being is to be safeguarded.

Then, too, people could save a great deal of the doctor's time if they would be more careful about preventing injuries, accidental poisonings, and communicable illnesses. A neighborhood youngster of ours had the right idea when he called his gang together and told them they had to be more careful. "There's a shortage of doctors now and we can't be taking up their time by getting hurt." Parents could well follow this unusual lad's example. In industry a national committee is spending thousands of dollars in an effort to reduce man-hours of work lost through accidents in order to maintain production at full capacity. Why not a similar campaign on the home front so that the doctor will not need to use his limited time for sewing up minor wounds and fixing broken bones which a little more foresight could have prevented.

There is another important thing every family should do. All poisonous substances, such as insect poison, rat poison, medicines, kerosene, gasoline, cleaning fluids, lye, and many others, should be kept in places where childish hands cannot possibly get at them. Hardly a week goes by

that the doctor whose practice includes children is not called upon several times to treat some child who has swallowed a potential poison. Kerosene is one of the worst offenders and if aspirated into the lung sets up a chemical pneumonia which may require weeks of medical and hospital care. In our own experience within the last six days, one child drank deodorant solution, another ate ant poison, a third swallowed ten laxative tablets and a fourth drank a bleaching fluid.

Still another way in which the general public could reduce its demands for medical service is to really go after the problem of spread of communicable diseases. Proper precautions are customarily followed in common diseases such as measles, whooping cough, mumps, scarlet fever and the like, but all these put together are but a mere pittance compared to the ravages wrought by infections of the respiratory tract. The development of a "cold", or influenza, in one member of a family should become a challenge to the other members of the family to avoid getting it. A great deal more care could be exercised in excluding from school children with coughs and colds. When persons with communicable infections of this type mingle freely with non-infected persons, the inevitable result is the development of some illness sufficiently severe to require medical attention and hospitalization. It would be ridiculous, of course, to expect that all illnesses of this sort could be prevented, but a real effort in this direction on the part of the public would certainly help.

This is a time, too, when preventive inoculations should be tremendously increased. People who permit themselves or their children to acquire diseases for which there are reliable immunizing agents are as unpatriotic as those who use tires and gasoline for unnecessary purposes. No physician in Iowa should have to be called upon to treat a case of diphtheria or smallpox throughout the duration of the war.

These are some of the things—there are others—which the people at home should understand clearly if they would conserve their limited supply of doctors and conserve the time of their doctors for most efficient use. A heavy responsibility rests upon the shoulders of the physicians whose unsung and prosaic rôle during the present crisis calls upon them to put forth double or even quadruple efforts without the distinguishing glory of military insignia. They fully comprehend the trust placed in them by the men in military service, some of whom are serving valiantly in distant lands, to look after their loved ones at home. That trust is not misplaced. The people at home

will be taken care of, but it will help much during the trying days ahead to have a sympathetic and cooperative citizenry.

FOURTH ANNUAL IMMUNIZATION CAMPAIGN

The JOURNAL notes with approval that plans are going ahead again this year for a state-wide immunization campaign against diphtheria and smallpox. November 9 has been set as the opening date, and the work will continue throughout the week. One's first reaction might well be that with the present shortage of doctors programs of this sort should not be undertaken. But we believe a little more mature reflection will make it apparent that now preventive programs are of more significance than ever. Physicians should not be called upon to use one moment of their precious time to treat patients for which there is as certain and specific a prevention as there is for diphtheria and smallpox.

On the face of it, it would appear that something had really been accomplished by the three previous campaigns in which 147,643 persons were vaccinated against smallpox and 115,498 received antidiphtheria inoculations. Smallpox cases in the state have fallen from 1,057 in 1939—the year of the first campaign—to 114 in 1941, and this year only 15 cases have been reported through the first seven months. Diphtheria cases have shown a similar decline, dropping from 305 in 1939 to 199 in 1941, and with only 98 cases being reported in the first seven months of this year. True, these are gratifying figures and undoubtedly they are due in part directly to the large number of persons immunized during the campaign, plus many others influenced to be immunized in the interim between the campaigns incidental to the attendant publicity. These were the purposes of the campaigns. On the other hand, it must be kept in mind that diseases like smallpox and diphtheria go in cycles. Quite possibly investigation of statistics in areas where campaigns have not been carried on as they have in Iowa would also show a drop in total cases for the reason that the present may be a time of general quiescence. Real proof of accomplishment will come when these diseases start on the upswing again, as they are certain to do eventually. Only then can it be told whether or not Iowa is receding from its undesirable reputation of being one of the hotbeds of smallpox infestation in the nation. Relaxation and complacency now have no place in the fight against these diseases. Crops of unprotected individuals must not be permitted to collect, because as sure as they do, then it is

as certain that one day these pestilential infections will strike again and strike hard with illness and death the unnecessary harvest.

It is hoped that the county societies will enter into the fourth campaign as numerically and as wholeheartedly as they have in the three previous campaigns. This cooperative program between the Iowa State Medical Society and the Iowa State Department of Health is one of which we all have just reason to be proud. It is preventive medicine working at its best under the democratic system.

CHEMOTHERAPY IN MEASLES

Knowledge of a disease which is not benefited by the newer forms of chemotherapy is as important as knowledge of conditions in which these drugs are effective. Measles appears to be a disease in which the sulfonamide compounds fail to produce beneficial results. Gibel and Litvak in the September, 1942, issue of the *Journal of Pediatrics* report a study in which they used sulfathiazole routinely for 200 patients with measles and used 201 other cases as controls. The dose of sulfathiazole given was 1.5 grains per pound of body weight the first day, followed by one grain per pound each day until the temperature remained normal for forty-eight hours. The leukopenia commonly present in measles was not considered a contraindication to the use of sulfathiazole.

The two groups of cases were compared in several ways. For instance, the duration of the primary fever resulting from the measles itself was not reduced in the sulfathiazole group of patients; nor was the period of hospitalization reduced by the use of sulfathiazole. Considering only the uncomplicated cases, the average hospital stay for the control group was 5.6 days and for the drug group it was 5.7 days. An interesting finding was that the routine use of sulfathiazole did not prevent the occurrence of common complications, such as otitis media. However, the story was quite different when bronchopneumonia complicated measles. Here sulfathiazole was promptly effective and was unquestionably a life-saving measure. In 1941 the mortality rate of 53 patients with post-measles bronchopneumonia, as compared with similar patients in previous years without the use of sulfathiazole, was greatly reduced (1.8 per cent to 16.4 per cent).

The authors conclude that the routine use of sulfathiazole in all cases of measles is not warranted. Its ineffectiveness is probably to be explained on the basis that measles is a virus disease; and so far, none of the sulfo drugs have been found very effective in any disease whose

causative factor is a virus. Among these might be mentioned infantile paralysis, influenza, chickenpox and smallpox. Once again, then, it comes home to us to call our shots carefully in the use of these newer powerful remedies. Exhibition of them where they are useless is poor therapeutics.

PHARMACY CORPS IN THE ARMY

Recently bills have been introduced into both Houses of Congress (H. R. 7432 and S. 2690) relative to the creation of a Pharmacy Corps in the Army which would consist of seventy-two officers. These officers would have the rank of second lieutenants appointed from pharmacists between twenty-one and thirty-two years of age who are graduates of recognized schools or colleges of pharmacy requiring four years of instruction for graduation. Promotions would occur from time to time dependent upon the number of years spent in the service.

Representative Durham, who introduced the bill into the House (where it is now pending in the Committee on Military Affairs), had the following to say in its support:

"At the present time in the army, various phases of the purchase, shipment, storage, compounding, and dispensing of drugs and medicines are assigned to the Sanitary Corps and the Medical Administrative Corps with consequent division of authority and responsibility, overlapping the duties and unnecessary red tape. All of these functions should be coordinated in a pharmacy corps of equal standing and authority as the Medical, Dental and Veterinary Corps. Pharmacists by their education and training know how to purchase drugs and medicines wisely and economically. They know the special precautions which must be taken in storing and transporting certain drugs to prevent deterioration through excessive heat, cold, moisture or dryness. Failure to utilize fully the services of pharmacists can only result in a lack of efficiency and an uneconomic use of medical supplies.

"In addition to his knowledge of the sources of supply of drugs, their testing, storage, transportation, compounding, dispensing and use, the pharmacist's training fits him to render other special services related to the supply of health services, should an emergency demand it.

"Enactment of the pharmacy corps bill will not only give the American soldier the protection of a well coordinated pharmaceutical service, make available large, unused resources of skill and knowledge for fruitful application, but would re-

lease many physicians who are now performing tasks which would be handled as well or better by pharmacists. The army is short of physicians and yet many doctors are performing tasks which are more pharmaceutical than medical. Several medical journals have recently warned that many physicians in the army are liable to lose their skill and technic through lack of their use. I believe that physicians in the army should be relieved of all the duties which they now perform which could be assumed by men with pharmaceutical training.

"This bill is supported by the American Pharmaceutical Association, the National Association of Retail Druggists, the American Association of Colleges of Pharmacy, the National Association of Boards of Pharmacy, and the National Drug Trade Conference."

NEW ASSISTANT TO THE EDITOR

The October issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY is the handiwork of the new assistant to the editor, Mrs. Dorothy Dolk. Mrs. Dolk is no stranger to the medical profession in Iowa, nor to the work of the JOURNAL. She has been associated with the central office for four years; her first two years she served in the membership department and also helped with some of the JOURNAL work. In October, 1940, she was made secretary of the Speakers Bureau, and in that capacity she has become well-known to many of the doctors in the state. On September 1 of this year, she was made assistant to the editor, and we know that with her capable assistance the JOURNAL will continue to hold its place with medical publications in the United States.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Report of Delegates to Iowa Interprofessional Association Annual Meeting September 13, 1942

Doctors R. D. Bernard, A. L. Jenks, and R. L. Parker, delegates of the Iowa State Medical Society to the Iowa Interprofessional Association, met with delegates from the Iowa State Dental Society, Iowa Pharmaceutical Association, Iowa Veterinary Medical Association, and the Iowa State Association of Registered Nurses on Sunday, September 13, at Hotel Kirkwood in Des Moines. A report of last year's activities was given by Mr. Eisentraut, president; a change in the constitution was officially adopted, which will give the association a wider choice of officers; plans for next year were discussed; and officers

were elected. Miss Stella Scott, R.N., was elected president; Robert D. Wall, D.V.M., vice president; and J. A. Barger, D. V. M., secretary-treasurer. The nurses invited the association to meet with them in 1943 and the invitation was accepted.

PROPOSED IOWA ANESTHESIOLOGICAL SOCIETY

The JOURNAL has been asked to publish the following notice in order that those physicians in the state interested in such an organization may be cognizant of its possible formation:

"Will all physicians in the state who are interested in anesthesia and are practicing anesthesia either part time or full time please communicate with Dr. Stuart C. Cullen, Anesthesia Division, University Hospitals, Iowa City, relative to their interest in an Iowa Anesthesiological Society? A small group of physicians has already expressed considerable interest in such a society and a meeting was held at the University Hospitals on July 25, 1942, to discuss its organization.

"This group is desirous of learning the extent of interest of the physicians in the state doing anesthesia before progressing to more complete organization."

LIEUTENANT COLONEL SEELEY TRANS- FERRED FROM PROCUREMENT AND ASSIGNMENT SERVICE

Announcement has been made of the detachment of Lieutenant Colonel Sam F. Seeley from the position of executive officer of the Procurement and Assignment Service and his transfer to active duty with the Army Medical Department. Lieutenant Colonel Seeley has held the position of executive officer in the Procurement and Assignment Service since its establishment in October, 1941, and during that time has made many friends throughout the country. The physicians in Iowa extend their best wishes for his success in the new work to which he has been assigned.

CHANGES OF ADDRESS

Help your central office to main-
tain an accurate mailing list.
Send changes of address
promptly to The Journal,
505 Bankers Trust Bldg.,
Des Moines, Iowa.

Roster of Physicians in Military Service

As of September 25, 1942

Adair County	Houlahan, Jay E., Mason City (Selfridge Field, Michigan)
Cornell, Dale D., Greenfield (Camp Murray, Washington)	Lannon, James W., Clear Lake (Carlisle Barracks, Pennsylvania)
Gantz, Albert J., Greenfield (San Francisco, California)	Long, Draper L., Mason City (Santa Ana, California)
Adams County	Marinos, Harry G., Mason City (Fort Riley, Kansas)
Willett, Wilton J., Carbon (Fort Smith, Arkansas)	Sternhill, Irving, Mason City (Camp Robinson, Arkansas)
Allamakee County	Cherokee County
Hogan, Paul W., Waukon	Bullock, Grant D., Washta (Camp Crowder, Missouri)
Ivens, Milton H., Waukon (Camp Shelby, Louisiana)	Ihle, Charles W., Jr., Cherokee (Fort Leonard Wood, Missouri)
Kiesau, Milton F., Postville (Fort Leonard Wood, Missouri)	Noble, Rusl P., Cherokee (Sacramento, California)
Audubon County	Swift, Charles F., Jr., Cherokee (Fort Bliss, Texas)
Koehne, Frederick D., Audubon (Oroville, Washington)	Chickasaw County
Benton County	Caulfield, John D., New Hampton
Koontz, Lyle W., Vinton	Murphy, Arlo L., Fredericksburg (Fort Clayton, Panama Canal Zone)
Lewis, Leland S., Garrison	O'Connor, Edwin C., New Hampton (Camp Crowder, Missouri)
Senfeld, Sidney, Belle Plaine	Richmond, Paul C., New Hampton (Fort Leonard Wood, Missouri)
Black Hawk County	Clarke County
Bickley, Donald W., Waterloo	Mikelson, Clarence J., Osceola
Bickley, John W., Waterloo	Clay County
Butts, John H., Waterloo (Ames, Iowa)	Adams, Glenn W., Royal (Fort Clayton, Panama Canal Zone)
Cooper, Clark N., Waterloo (Mare Island, California)	Edington, Frank D., Spencer (Scott Field, Illinois)
Elyson, Craig D., Waterloo (Great Lakes, Illinois)	Jones, Clare C., Spencer (San Diego, California)
Hartman, Howard J., Waterloo	King, Dean H., Spencer (Spokane, Washington)
Henderson, Lauren J., Cedar Falls (Fort Ord, California)	Clayton County
Hoyt, Charles N., Cedar Falls (McClellan Field, Alabama)	Anderson, Holger M., Strawberry Point (Omaha, Nebraska)
Ludwick, Arthur L., Waterloo (A.P.O., New York, New York)	Rhomberg, Edward B., Guttenberg (Fort Sam Houston, Texas)
Paige, Robert T., La Porte City (Des Moines, Iowa)	Clinton County
Rohlf, Edward L., Jr., Waterloo (Springfield, Missouri)	Ellison, George M., Clinton
Seibert, Cecil W., Waterloo	Hill, Don E., Clinton
Smith, Eugene E., Waterloo (Scott Field, Illinois)	King, Ross C., Clinton (Camp Chaffee, Arkansas)
Smith, Rex I., Waterloo	Meyer, Alfred K., Clinton (Denver, Colorado)
Smith, Rudyard G., Waterloo (A.P.O., New York, New York)	Norment, John E., Clinton (Mare Island, California)
Trunnell, Thomas L., Waterloo (Great Lakes, Illinois)	Riedesel, Elmer V., Wheatland (Fort Douglas, Utah)
Boone County	Snyder, Dean C., De Witt
Brewster, Edward S., Boone (A.P.O., Los Angeles, California)	Crawford County
Healy, Maurice D., Boone	Fee, Charles H., Denison (Bowman Field, Kentucky)
Shane, Robert S., Pilot Mound (Des Moines, Iowa)	Maire, Eugene J., Vail (San Francisco, California)
Bremer County	Wetrich, Max F., Manilla
Amlie, Paul J., Tripoli (Des Moines, Iowa)	Dallas-Guthrie Counties
Osnes, Elias N., Readlyn (Vallejo, California)	Fail, Charles S., Adel (Farragut Air Base, Idaho)
Buchanan County	Margolin, Julius M., Perry (Camp Chaffee, Arkansas)
Barton, John C., Independence (Omaha, Nebraska)	Nicoll, Charles A., Panora (Camp Barkeley, Texas)
Leehey, Paul J., Independence (Fort Ord, California)	Osborn, Clarence R., Dexter
Buena Vista County	Wilke, Frank A., Woodward (A.P.O., New York, New York)
Almquist, Reuben E., Albert City (Camp Shelby, Mississippi)	Decatur County
Brecher, Paul W., Storm Lake (Camp White, Oregon)	Doss, William N., Leon (A.P.O., San Francisco, California)
Mailliard, Robert E., Storm Lake (Watertown, New York)	Gamet, Elmo E., Lamoni (Tacoma, Washington)
Shope, Charles D., Storm Lake (Fort Des Moines, Iowa)	Delaware County
Witte, Herbert J., Storm Lake (Fort Robinson, Nebraska)	Baumgarten, Oscar, Earlvile (A.P.O., Los Angeles, California)
Butler County	Clark, Richard E., Manchester
Andersen, Bruce V., Greene (Kansas City, Missouri)	Des Moines County
James, Roger A., Allison (Mare Island, California)	Heitzman, Paul O., Burlington (Fort Leonard Wood, Missouri)
Roefs, Floyd O., Parkersburg (Springfield, Missouri)	Jenkins, George D., Burlington (Fort Dix, New Jersey)
Calhoun County	Lohmann, Carl J., Burlington
Grinley, Andrew V., Rockwell City (A.P.O., New York, New York)	McKitterick, John C., Burlington (Navy Pier, Chicago, Illinois)
Hobart, Francis W., Lake City (Camp Grant, Illinois)	Dickinson County
Peek, Levin H., Lake City (Jefferson Barracks, Missouri)	Buchanan, John J., Milford (Great Lakes, Illinois)
Stevenson, William W., Rockwell City (San Francisco, California)	Henning, Garold G., Milford (Fort Lewis, Washington)
Weyer, Joseph J., Lohrville (Camp Carson, Colorado)	Rodawig, Don F., Spirit Lake (Camp Grant, Illinois)
Carroll County	Dubuque County
Anneberg, A. Reas, Carroll (Camp Barkeley, Texas)	Beddoes, Morris G., Cascade (Omaha, Nebraska)
Anneberg, Walter A., Carroll	Conzett, Donald C., Dubuque (Cedar Rapids, Iowa)
Cochran, J. Lawrence, Carroll (Gulfport, Mississippi)	Entringer, Albert J., Dubuque (Camp Murray, Washington)
Freedland, Maurice, Coon Rapids	Hall, Carl B., Dubuque
Morrison, John R., Carroll (Carlisle Barracks, Pennsylvania)	Knoll, Albert H., Dubuque
Morrison, Roland B., Carroll (March Field, California)	Langford, William R., Epworth (Rapid City, South Dakota)
Pascoe, Paul L., Carroll (Bowman Field, Kentucky)	Leik, Donald W., Dubuque (Las Vegas, Nevada)
Scannell, Raymond C., Carroll (Fort Leonard Wood, Missouri)	Mueller, John J., Dyersville
Wyatt, Merlin R., Manning (Salt Lake City, Utah)	Olson, Paul F., Dubuque (Bremerton, Washington)
Cass County	Paulus, James W., Dubuque
Egbert, Daniel S., Atlantic (Fort Snelling, Minnesota)	Plankers, Arthur G., Dubuque (Fort Sill, Oklahoma)
Longstreth, Clyde M., Atlantic	Schueler, Charles J., Dubuque
Needles, Roscoe M., Atlantic (Camp Polk, Louisiana)	Sharpe, Donald C., Dubuque (Fort Leonard Wood, Missouri)
Cedar County	Smith, Carl W., Dubuque (San Francisco, California)
Mosher, Martin L., West Branch (Camp Chaffee, Arkansas)	Steffens, Lincoln F., Dubuque (Fort Snelling, Minnesota)
O'Neal, Harold E., Tipton (Pine Camp, New York)	Ward, Donovan F., Dubuque (Mare Island, California)
Cerro Gordo County	Emmet County
Adams, Carroll O., Mason City	Clark, James P., Estherville
Egloff, William C., Mason City	Miller, Oscar H., Estherville (Great Lakes, Illinois)
Hale, Albert E., Dougherty	
Harris, Robert H., Mason City (Selfridge Field, Michigan)	
Harrison, Glenn E., Mason City (Camp Robinson, Arkansas)	
Holman, David O., Mason City (Camp Grant, Illinois)	

- Fayette County
 Belding, Leland, Waucoma
 Camp, Donald E., West Union
 Henderson, Walker B., Oelwein (Jefferson Barracks, Missouri)
 Hoss, Ardo M., West Union
 Moen, Harry P., West Union (Denver, Colorado)
 Sulzbach, John, Oelwein
- Floyd County
 Baltzell, Winston C., Charles City (Fort Sam Houston, Texas)
 Mackie, Donald G., Charles City
 Toller, Hillard A., Charles City (Fort Cronkhite, California)
- Franklin County
 Byers, Walter L., Sheffield
 Walton, Seth G., Hampton (Camp Robinson, Arkansas)
- Fremont County
 Kerr, W. Hawley, Hamburg
 Marrs, Walford D., Tabor (San Francisco, California)
 Wanamaker, A. Roy, Hamburg
- Greene County
 Castles, William A., Jr., Rippey (Fort Riley, Kansas)
 Hanson, Laurence C., Jefferson (Camp Grant, Illinois)
 Jongewaard, Albert J., Jefferson (Great Lakes, Illinois)
 Limberg, John I., Jr., Jefferson
- Hamilton County
 Buxton, Otho C., Webster City (March Field, California)
 Howar, Bruce F., Jewell (A.P.O., New York, New York)
 James, David W., Kamramp (Camp Livingston, Louisiana)
 Lewis, William B., Webster City (Vancouver, Washington)
 Mooney, Felix P., Jewell (A.P.O., New York, New York)
 Ptacek, Joseph L., Webster City (Sheppard Field, Texas)
- Hancock-Winnebago Counties
 Dolmage, George H., Buffalo Center
 Dulmes, Abraham H., Klemme (Camp Lewis, Washington)
 Eller, Lancelot W., Kanawha (Fort Leonard Wood, Missouri)
 Shaw, David F., Britt (Long Beach, California)
 Thomas, Clifford W., Forest City
- Hardin County
 Houlihan, Francis W., Ackley (Fort Knox, Kentucky)
 Jansonius, John W., Eldora (Vancouver, Washington)
 Johnson, Robert J., Iowa Falls (Fort Bliss, Texas)
 Johnson, William A., Alden (Pendleton, Oregon)
 Shurts, John J., Eldora (Camp Roberts, California)
 Todd, V. Stanley, Eldora (Camp Robinson, Arkansas)
- Harrison County
 Bergstrom, Albin C., Missouri Valley
 Byrnes, Clemet W., Dunlap (Jefferson Barracks, Missouri)
 Tamisie, Francis X., Missouri Valley (Jefferson Barracks, Missouri)
- Henry County
 Brown, Wayne B., Mount Pleasant (Springfield, Missouri)
 Hartley, Byron D., Mount Pleasant (Phoenix, Arizona)
 Megorden, William H., Mount Pleasant
 Ristine, Leonard P., Mount Pleasant (Sioux Falls, South Dakota)
- Humboldt County
 Arent, Asa S., Humboldt (March Field, California)
 Coddington, James H., Humboldt
- Iowa County
 McDaniel, John D., Marengo (Fort Clark, Texas)
- Jasper County
 Minkel, Roger M., Newton (A.P.O., New York, New York)
 Ritchey, Sterling J., Newton
- Jefferson County
 Castell, John W., Fairfield (A.P.O., New York, New York)
 Gittler, Ludwig, Fairfield (A.P.O., New York, New York)
 Gruber, Harold E., Fairfield (Camp Grant, Illinois)
 James, Lora D., Fairfield
 Taylor, Ingram C., Fairfield (Washington, D. C.)
- Johnson County
 Allen, James H., Iowa City
 Boiler, William F., Iowa City (Fort Leonard Wood, Missouri)
 Boyd, Eugene J., Iowa City (Camp Blanding, Florida)
 Brinkhous, Kenneth M., Iowa City (Danville, Kentucky)
 Cooper, Wayne K., Iowa City (Jefferson Barracks, Missouri)
 Crowell, Edwin A., Iowa City
 Diddle, Albert W., Iowa City (Key West, Florida)
 Elmquist, Homer S., Iowa City (San Diego, California)
 Feller, Alto E., Iowa City (Camp Claiborne, Louisiana)
 Flynn, Joseph E., Iowa City (Hot Springs, Arkansas)
 Fourt, Arthur S., Iowa City (A.P.O., New York, New York)
 Francis, Norton L., Iowa City (Annapolis, Maryland)
 Galinsky, Leon J., Oakdale (Fort Logan, Colorado)
 Garlinghouse, Robert O., Iowa City (Fort Snelling, Minnesota)
 Gilliland, C. R., Iowa City (Great Lakes, Illinois)
 Hardin, Robert C., Iowa City (A.P.O., New York, New York)
 Harris, Karl S., Iowa City (Camp Crowder, Missouri)
 Irwin, Ralph L., Iowa City (Great Lakes, Illinois)
 January, Lewis E., Iowa City (Davis Field, Arizona)
 Keislair, Henry D., Iowa City
 Longwell, Freeman H., Iowa City (Cumberland, Maryland)
- Nagyfy, Stephen F., Iowa City (Pensacola, Florida)
 Newman, Robert W., Iowa City (Upper Darby, Pennsylvania)
 Paulus, Edward W., Iowa City (A.P.O., New York, New York)
 Petersen, Vernon W., Iowa City (A.P.O., New York, New York)
 Sells, Robert L., Jr., Iowa City (Hamilton Field, California)
 Skouge, O. T., Iowa City
 Smith, Harold F., Iowa City (Great Lakes, Illinois)
 Springer, Eugene W., Iowa City (Pontiac, Michigan)
 Stadler, Harold E., Iowa City (Fort Harrison, Indiana)
 Staggs, William A., Iowa City (Camp Robinson, Arkansas)
 Stump, Robert B., Iowa City (Fort Leonard Wood, Missouri)
 Titus, Elton L., Iowa City (Fort Wright, New York)
 Vest, William M., Iowa City (Fort Ord, California)
 Ziffren, Sidney E., Iowa City (Springfield, Missouri)
- Keokuk County
 Bjork, Floyd, Keota
 Montgomery, Guy E., Keota (Fort Sam Houston, Texas)
 Wiley, Dudley, Hedrick (Mason City, Washington)
- Kossuth County
 Clapsaddle, Dean W., Burt (Durham, North Carolina)
 Williams, Robert L., Lakota (San Diego, California)
- Lee County
 Ashline, George H., Keokuk (Camp Young, California)
 Cleary, Hugh G., Fort Madison (Parsons, Kansas)
 Cooper, Raymond E., Keokuk (Fort Leonard Wood, Missouri)
 Johnstone, Alexander A., Keokuk (Camp Robinson, Arkansas)
 McKee, Thomas L., Keokuk (Fort Dix, New Jersey)
 Pumphrey, Loira C., Keokuk (Fort Leavenworth, Kansas)
 Rankin, John R., Keokuk (Mare Island, California)
 Steffey, Fred L., Keokuk (Fort Snelling, Minnesota)
- Linn County
 Andre, Gaylord R., Lisbon (Camp Barkley, Texas)
 Berney, Paul W., Cedar Rapids (San Francisco, California)
 Challed, Don S., Cedar Rapids (Fort Ord, California)
 Coughlan, Vernon H., Cedar Rapids (Fort Snelling, Minnesota)
 Courter, Willard O., Springville (Fort Warren, Wyoming)
 Halpin, Lawrence J., Cedar Rapids (Atlanta, Georgia)
 Hecker, John T., Cedar Rapids (Santa Ana, California)
 Jirsa, Harold O., Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Keith, John J., Marion
 Kruckenberg, William G., Mount Vernon (Elgin, Illinois)
 Locher, Robert C., Cedar Rapids
 MacDougal, Roderick F., Cedar Rapids
 McConkie, Edwin B., Cedar Rapids (Jefferson Barracks, Missouri)
 McQuiston, J. Stuart, Cedar Rapids (Camp Carson, Colorado)
 Netolicky, Robert Y., Cedar Rapids (Mare Island, California)
 Noe, Carl A., Cedar Rapids (Hot Springs, Arkansas)
 Parke, John, Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Proctor, Rothwell D., Cedar Rapids (Corpus Christi, Texas)
 Redmond, James J., Cedar Rapids (Camp Claiborne, Louisiana)
 Sedlacek, Leo B., Cedar Rapids
 Sulek, Arthur E., Cedar Rapids (Camp Shelby, Mississippi)
 Woodhouse, Keith W., Cedar Rapids
 Wray, Robert M., Cedar Rapids (A.P.O., San Francisco, California)
 Yavorsky, William D., Cedar Rapids (A.P.O., San Francisco, California)
- Louisa County
 DeYarman, Kyle T., Morning Sun
- Lucas County
 Lister, Kenneth E., Chariton (Fort Snelling, Minnesota)
- Lyon County
 Corcoran, Thomas E., Rock Rapids (A.P.O., New York, New York)
 Moriarty, John F., Rock Rapids (Fort Leonard Wood, Missouri)
- Madison County
 Boden, Harold N., Truro (Fresno, California)
 Wicks, Ralph F., Winterset (Portland, Oregon)
- Mahaska County
 Bennett, Geoffrey W., Oskaloosa (Des Moines, Iowa)
 Lemon, Kenneth M., Oskaloosa (Rapid City, South Dakota)
- Marion County
 Elliott, Vance J., Knoxville (South Laguna, California)
 Mater, Dwight A., Knoxville (Scott Field, Illinois)
 Ralston, F. Paul, Knoxville
 Schroeder, Mellgren C., Pella
 Williams, Donald B., Knoxville
- Marshall County
 Carpenter, Ralph C., Marshalltown (Vancouver, Washington)
 Marble, Edwin J., Marshalltown (San Diego, California)
 Marble, Willard P., Marshalltown (Walla Walla, Washington)
 Noonan, James J., Marshalltown (Fort Douglas, Utah)
 Phelps, Richard E., State Center (Camp Baker, California)
 Smith, Elmer M., State Center (Gowen Field, Idaho)
 Wells, Rodney C., Marshalltown (Gowen Field, Idaho)

Mills County

DeYoung, Ward A., Glenwood (Omaha, Nebraska)
 Shonka, Thomas E., Malvern (Camp Russell, Texas)

Mitchell County

Culbertson, Robert A., St. Ansgar (Fort Des Moines, Iowa)
 Moore, Edson E., (Camp Pickett, Virginia)

Monona County

Almer, Lennart E., Moorehead (Fort Knox, Kentucky)
 Stauch, Martin O., Whiting (Fort Roscrans, California)
 Wainwright, Maxwell T., Mapleton (Camp Barkeley, Texas)

Montgomery County

Bastron, Harold C., Red Oak (Pendleton, Oregon)
 Moriarty, Lauren R., Villisca (Camp Robinson, Arkansas)

Muscatine County

Ady, Albert E., West Liberty (A.P.O., San Francisco, California)
 Carlson, Elmer H., Muscatine (Chicago, Illinois)
 Goad, Robley R., Muscatine (Hyattsville, Maryland)
 Muhs, Emil O., Muscatine (Camp Robinson, Arkansas)
 Sywassink, George A., Muscatine (Vancouver, Washington)
 Whitmer, Lyle H., Wilton Junction (Fort Sill, Oklahoma)

O'Brien County

Hayne, Willard W., Paullina (March Field, California)
 Moen, Stanley T., Hartley (Los Angeles, California)
 Myers, Kermit W., Sheldon (White Bear, Minnesota)

Osceola County

Kuntz, George S., Sibley (A.P.O., New York, New York)

Page County

Blackman, Nathan, Shenandoah
 Bossingham, Earl N., Clarinda (Camp Roberts, California)
 Burdick, Francis D., Shenandoah (Carlisle Barracks, Pennsylvania)
 Burnett, Francis K., Clarinda (Cheyenne, Wyoming)
 Little, Emmet B., Shenandoah
 Rausel, Gerald R., Clarinda (Salt Lake City, Utah)
 Savage, Lester W., Shenandoah (Fort Meade, Maryland)

Plymouth County

Foss, Robert H., Remsen (Fort Wright, Washington)

Pocahontas County

Blair, Fred L., Jr., Fonda
 Larson, John B., Laurens (Camp Barkeley, Texas)
 Leserman, Lester K., Rolfe (Camp Livingston, Louisiana)

Polk County

Abbott, Walter D., Des Moines (Oakland, California)
 Anderson, N. Boyd, Des Moines (Fort Custer, Michigan)
 Angell, Charles A., Des Moines
 Anspach, Royal S., Mitchellville (MacDill Field, Florida)
 Barner, John L., Des Moines (Atlanta, Georgia)
 Bates, Maurice T., Des Moines (Washington, D. C.)
 Bender, Herman R., Des Moines (Carlisle Barracks, Pennsylvania)
 Brown, Addison W., Des Moines (Omaha, Nebraska)
 Bruner, Julian M., Des Moines (Fort Sam Houston, Texas)
 Bruns, Paul D., Des Moines (Carlisle Barracks, Pennsylvania)
 Burgeson, Floyd M., Des Moines (A.P.O., New York, New York)
 Caldwell, John W., Des Moines (Edmonton, Alberta, Canada)
 Chambers, James W., Des Moines
 Chase, William B., Jr., Des Moines (Seattle, Washington)
 Connell, John R., Des Moines (A.P.O., New York, New York)
 Corn, Henry H., Des Moines (Omaha, Nebraska)
 Coughlan, Daniel W., Des Moines (Camp Robinson, Arkansas)
 Crowley, Fred A., Des Moines (Hot Springs, Arkansas)
 DeCicco, Ralph, Des Moines (Oahu, Hawaii)
 Decker, Henry G., Des Moines (San Diego, California)
 Duhkin, Milton A., Des Moines (Fort Huachuca, Arizona)
 Elliott, Olin A., Des Moines (Santa Ana, California)
 Ellis, Howard G., Des Moines
 Ervin, Lindsay J., Des Moines (Fort Clark, Texas)
 Fried, David, Des Moines (Carlisle Barracks, Pennsylvania)
 George, Everett M., Des Moines
 Gercke, E. W., Des Moines

Goldberg, Louie, Des Moines (Long Beach, California)
 Gordon, Arnold M., Des Moines (Camp Barkeley, Texas)
 Graeber, Frederick O., Des Moines (Aberdeen, South Dakota)
 Gurau, Henry H., Des Moines (Portland, Oregon)
 Haines, Diedrich J., Des Moines (Denver, Colorado)
 Hess, John, Jr., Des Moines (Carlisle Barracks, Pennsylvania)
 James, Audra D., Des Moines (Great Lakes, Illinois)
 Johnston, C. Harlan, Des Moines (Augusta, Georgia)
 Kast, Donald H., Des Moines (Fort Douglas, Utah)
 Kelly, Dennis H., Des Moines (Denver, Colorado)
 Klocksiem, Harold L., Des Moines
 Kottke, Elmer E., Des Moines (Denver, Colorado)
 La Tona, Salvatore, Des Moines (Carlisle Barracks, Pennsylvania)
 Lederman, James, Des Moines
 Lehman, Emery W., Des Moines (Vancouver, Washington)
 Lovejoy, E. Parish, Des Moines (Mare Island, California)
 Maloney, Paul J., Des Moines (Fort Lewis, Washington)
 Marquis, George S., Des Moines (Great Lakes, Illinois)
 Martin, Lowell E., Des Moines
 Mauritz, Emory L., Des Moines (Camp Gruber, Oklahoma)

McCoy, Harold J., Des Moines (Iowa City, Iowa)

McDonald, Donald J., Des Moines (March Field, California)

McNamee, Jesse H., Des Moines (Seattle, Washington)

Mencher, E. W., Des Moines

Merkel, Byron M., Des Moines (Galveston, Texas)

Morden, R. Paul, Des Moines (March Field, California)

Nelson, Arnold L., Des Moines (Fort Sam Houston, Texas)

Noun, Louis J., Des Moines (Great Lakes, Illinois)

Patton, Bernard W., Des Moines (Camp Robinson, Arkansas)

Pearlman, Leo R., Des Moines (Fort Ord, California)

Peisen, Conan J., Des Moines

Penn, Eugene C., West Des Moines (Spokane, Washington)

Phillips, Allan B., Des Moines (Corpus Christi, Texas)

Porter, Robert J., Des Moines (Salt Lake City, Utah)

Powell, Lester D., Des Moines (San Diego, California)

Pratt, Elmer B., Des Moines (Camp Claiborne, Louisiana)

Priestley, Joseph B., Des Moines (Camp Carson, Colorado)

Purdy, William O., Des Moines (Camp Livingston, Louisiana)

Riegelman, Ralph H., Des Moines (Camp Grant, Illinois)

Rotkow, Maurice J., Des Moines (Dayton, Ohio)

Schaeferle, Martin J., Des Moines (Carlisle Barracks, Pennsylvania)

Schlaser, Vernon L., Des Moines (Great Lakes, Illinois)

Shepherd, Lloyd K., Des Moines (A.P.O., New York, New York)

Singer, Paul L., Des Moines (Camp Grant, Illinois)

Skulite, James, Des Moines (Staten Island, New York)

Smead, Howard H., Des Moines (Wichita Falls, Texas)

Smith, Herman J., Des Moines (San Diego, California)

Smith, Roland T., Des Moines

Snodgrass, Ralph W., Des Moines (Fort Douglas, Utah)

Snyder, Glen E., Grimes (Camp Robinson, Arkansas)

Sohm, Herbert H., Des Moines (San Diego, California)

Springer, Floyd A., Des Moines (San Francisco, California)

Stearns, A. Bryce, Des Moines (Denver, Colorado)

Stickler, Robert, Des Moines (Carlisle Barracks, Pennsylvania)

Stitt, Paul L., Des Moines (Great Lakes, Illinois)

Throckmorton, J. Fred, Des Moines (Camp Barkeley, Texas)

Toubes, Abraham A., Des Moines (Greenville, Mississippi)

Turner, Howard V., Des Moines (Camp Robinson, Arkansas)

Updegraff, Thomas, Des Moines (Carlisle Barracks, Pennsylvania)

Vaibel, Ellis K., Des Moines (Vancouver, Washington)

Warner, Eugene C., Des Moines (Washington, D. C.)

Willett, Wendell M., Des Moines (Fort Bragg, North Carolina)

Zarchy, Alex Z., Des Moines (Camp Lewis, Washington)

Pottawattamie County

Beaumont, Fred H., Council Bluffs (A.P.O., New York, New York)

Cogley, J. Phillip, Council Bluffs (Camp Shelby, Mississippi)

Collins, Robert M., Council Bluffs (San Diego, California)

Dean, Abbott M., Council Bluffs (Pensacola, Florida)

Hennessee, J. Donald, Council Bluffs (Chicago, Illinois)

Howard, Lloyd G., Council Bluffs (El Paso, Texas)

Hungerford, W. E., Avoca

Jensen, Arnold L., Council Bluffs (A. P. O., San Francisco, California)

Kurth, Clarence J., Council Bluffs (Omaha, Nebraska)

Limbert, Edwin M., Council Bluffs (Omaha, Nebraska)

Maiden, Synder D., Council Bluffs (San Francisco, California)

Martin, Lee R., Council Bluffs (Burbank, California)

Sternhill, Isaac, Council Bluffs (Fort Warren, Wyoming)

Tinley, Robert E., Council Bluffs (A.P.O., New York, New York)

Treynor, Jack V., Council Bluffs (South Bend, Indiana)

Wieseler, R. J., Avoca (McChord Field, Washington)

Wurl, Otto A., Council Bluffs (Camp Claiborne, Louisiana)

Poweshiek County

Seaman, Charles L., Mount Ayr (Van Buren, Arkansas)

Sac County

Bassett, George H., Sac City (San Diego, California)

Deters, Donald C., Schaller (A.P.O., New York, New York)

Evans, William I., Sac City

Klocksiem, Roy G., Odebold (Oakland, California)

Neu, Harold N., Sac City (Jefferson Barracks, Missouri)

Scott County

Balzer, Walter J., Davenport (Fort Douglas, Utah)

Bishop, James F., Davenport (A.P.O., Seattle, Washington)

Block, Lawrence A., Davenport

Boden, Worthy C., Davenport (Biloxi, Mississippi)

Brown, Douglas H., Davenport

Brown, Merle J., Davenport (Omaha, Nebraska)

Carey, Edward T., Davenport

Christiansen, Charles C., Dixon (A.P.O., San Francisco, California)

Evans, Harold J., Davenport

Gibson, Preston E., Davenport (Vancouver, Washington)

Hurevitz, Hyman M., Davenport (Denver, Colorado)

Kimberly, Lester P., Davenport

LaDage, Leo H., Davenport (Camp Campbell, Kentucky)

Marker, John I., Davenport (Omaha, Nebraska)

McMeans, Thomas W., Davenport (A.P.O., New York, New York)
 Neufeld, Robert J., Davenport
 Sheeler, Ivan H., Davenport (Omaha, Nebraska)
 Sorenson, Aral C., Davenport (Mare Island, California)
 Sunderbruch, John H., Davenport (Camp Maxey Pennsylvania)
 Weinberg, Harry B., Davenport (Fort Benning, Georgia)
 Zukerman, Cecil M., Bettendorf

Sioux County
 Gleysteen, Rodney R., Alton (Camp Elliott, California)
 Larson, Marvin O., Hawarden (Camp Robinson, Arkansas)

Story County
 Conner, John D., Nevada
 McFarland, Julian E., Ames (Farragut Air Base, Idaho)
 Rosebrook, Lee E., Ames
 Sperow, Wendell B., Nevada (San Diego, California)
 Thorburn, Orval L., Ames (Las Vegas, Nevada)

Tama County
 Boller, Galen C., Traer (Fort Leonard Wood, Missouri)
 Dobias, Stephen G., Chelsea (Fort Greeley, Alaska)
 Havlik, Al. J., Tama (A.P.O., San Francisco, California)
 Roberts, Charles R., Dysart
 Schaeferle, Lawrence G., Gladbrook (Fort Leonard Wood, Missouri)
 Standefer, Joe M., Tama (San Diego, California)

Taylor County
 Hardin, John F., Bedford

Wapello County
 Brentan, Emanuel, Ottumwa (Moline, Illinois)
 Brody, Sidney, Ottumwa
 Hughes, Robert O., Ottumwa (San Diego, California)
 Prewitt, Leland H., Ottumwa
 Selman, Ralph J., Ottumwa (El Paso, Texas)
 Struble, Gilbert C., Ottumwa (Fort Harrison, Indiana)

Warren County
 Fullgrabe, Emil A., Indianola (Bethesda, Maryland)
 Shaw, Ernest E., Indianola (Fort Sam Houston, Texas)
 Trueblood, Claire A., Indianola

Washington County
 Boice, Clyde L., Washington (Norman, Oklahoma)
 Droz, A. Keith, Washington (Grosse Ile, Michigan)
 Mast, Truman M., Washington (Sioux Falls, South Dakota)
 Ware, Stephen C., Kalona (Carlisle Barracks, Pennsylvania)

Wayne County
 Hyatt, Charles N., Jr., Humeston

Webster County
 Baker, Charles J., Fort Dodge (Camp Claiborne, Louisiana)
 Burch, Earl S., Dayton (Camp Livingston, Louisiana)
 Coughlan, Charles H., Fort Dodge (Jefferson Barracks, Missouri)
 Joyner, Nevill M., Fort Dodge (Brooklyn Field, Alabama)
 Larsen, Harold T., Fort Dodge (Newport, Rhode Island)
 Shrader, John C., Fort Dodge (Fort Douglas, Utah)
 Thatcher, Orville D., Fort Dodge (Williams Field, Arizona)
 Thatcher, Wilbur C., Fort Dodge
 Van Patten, E. Martin, Fort Dodge

Winneshiek County
 Fritchken, Arthur F., Decorah (Oahu, Hawaii)
 Hospodarsky, Leonard J., Ridgeway (McChord Field, Washington)
 Larson, Lester E., Decorah
 Van Besien, George J., Decorah (Fort Leavenworth, Kansas)

Woodbury County
 Bettler, Philip L., Sioux City
 Blackstone, Martin A., Sioux City
 Carney, Samuel D., Sioux City (Pomona, California)
 Cmeyla, Patrick M., Sioux City (A.P.O., San Francisco, California)
 Crowder, Roy E., Sioux City (San Diego, California)
 Dimsdale, Lewis J., Sioux City
 Donohue, Edmund S., Sioux City
 Elson, Vervil J., Danbury (A.P.O., Seattle, Washington)
 Frank, Louis J., Sioux City (Mare Island, California)
 Grossman, Milton, Sioux City (Hobbs, New Mexico)
 Honke, Edward W., Sioux City
 Knott, Robert C., Sioux City
 Krigsten, William M., Sioux City (Springfield, Missouri)
 Lande, Jacob N., Sioux City (Whalley, England)
 Mattice, Lloyd H., Danbury (Camp Livingston, Louisiana)
 Mugan, Robert C., Sioux City (Gowen Field, Idaho)
 Rarick, Ivan H., Sioux City (Soquel, California)
 Schwartz, John W., Sioux City

Worth County
 Osten, Burdette H., Northwood
 Westley, Gabriel S., Manly (Camp Forrest, Tennessee)

Wright County
 Aageson, Carl A., Dows
 Doles, Emmet A., Clarion (Phoenix, Arizona)
 Missildine, Whitney H., Eagle Grove (A.P.O., San Francisco, California)

POLICIES GOVERNING INITIAL APPOINTMENT OF MEDICAL OFFICERS

The current military program provides for a definite number of position vacancies in the different grades. The number of such positions must necessarily determine the promotion of officers already on duty and, in addition, the appointment of new officers from civilian life. Such appointments are limited to qualified physicians required to fill the position vacancies for which no equally well qualified medical officers are available. Such positions calling for an increase in grade should as far as possible be filled by promotion of those already in the service and not by new appointments.

If this policy is not followed, it would definitely penalize a large number of well qualified lieutenants and captains already on duty by blocking their promotions which have been earned by hard work.

The Surgeon General has announced the following policy, which will govern action to be taken on all applicants after September 15, 1942:

All appointments will be recommended in the grade of first lieutenant with the following exceptions:

Captain—1. Eligible applicants between the ages of 37 and 45 will be considered for appointment in the grade of captain by reason of their age and general unclassified medical training and experience.

2. Below the age of 37 and above the age of 32, consideration for appointment in the grade of captain will be given to applicants who meet all of the following minimum requirements:

(a) Graduation from an approved medical school.

(b) Internship of not less than one year, preferably of the rotating type.

(c) Special training consisting of three years residency in a recognized specialty.

(d) An additional period of not less than two years of study and/or practice limited to the specialty.

3. Eligible applicants who previously held commissions in the grade of captain in the Medical Corps (Regular Army, National Guard of the United States, or Officers Reserve Corps) may be considered for appointment in that grade provided they have not passed the age of 45 years.

Major—1. Eligible applicants between the ages of 37 and 55 may be considered for appointment under the following conditions:

(a) Graduation from an approved school.

(b) Internship of not less than one year, preferably of the rotating type.

(c) Special training consisting of three years residency in a recognized specialty.

(d) An additional period of not less than seven years of study and/or practice limited to the specialty.

(e) The existence of appropriate position vacancies.

(f) Additional training of a special nature of

(Continued on page 479)

Emergency Medical Service in Iowa

THOMAS A. BURCHAM, M.D., Chief, Emergency Medical Service

EDMUND G. ZIMMERER, M.D., Assistant Chief, Emergency Medical Service

"Iowa is not going to be bombed; we are too far inland to suffer any war casualties, and all this preparation and organization is useless." This is the current argument of the same people who said the Maginot line would hold and the Japs would not dare to attack us. But, all these things happened. How much better it would have been if we had prepared for war, even if it never came. And now, what can we lose by preparing for defense, even if it is never needed?

This is an all-out war. There are no noncombatants; and it is only because of our good fortune that thus far our civilian population has escaped war casualties such as were experienced by our fellow citizens in Hawaii and our allies in England. It is an all-out effort, too, which requires everyone to do his part. Those in uniform are receiving training. Those who by reason of their age or physical disability cannot bear arms also have a responsibility.

Physicians under the Procurement and Assignment have little choice; and with a loss of practitioners in every community, those who remain are overburdened with work. Yet they are so important, aye necessary, to the program of civilian defense that they cannot ignore their obligation to the nation and the community in which they live. Fortunately their professional training qualifies them for the new tasks they undertake, and they do not require long hours of special study and training. They should, however, have a basic understanding of the meaning of civilian defense and how their usual function of caring for the sick and injured integrates into the general plan. It is with this objective that this article has been prepared.

In 1916 Congress enacted laws enabling the various states to organize for community protection in emergency. In May 1941, the Office of Civilian Defense was created by an executive order of the President to coordinate defense activities of the various states, to plan measures for the adequate protection of life and property and to formulate instructional data for the operation of such plans. This office is headed by Judge James M. Landis; and Dr. George Baehr is the Medical Director. Regional defense areas have been set up coinciding generally with the corps areas of the army. Iowa is in the Seventh Area, of which Joseph D. Schultz is Regional Director,

with headquarters in Omaha. Dr. Wallace Hunt, Senior Surgeon, United States Public Health Service, is the Regional Medical Officer.

IOWA ORGANIZATION

In Iowa the Legislature has created the Iowa Industrial and Defense Commission. Its broad purposes are embraced in fourteen definitive articles, which include advising the chief executive in regard to the coordination of defense activities and recommending needed legislation concerning industrial plants, production and manufacture, agricultural industry and food supply, the labor supply and its training and allocation, consumer protection, housing, health, welfare and education.

The personnel of this Commission, named by Governor George A. Wilson, consists of Edwin A. Kimball, Chairman, Rodney Q. Selby, Executive Secretary, and the following members: Frank Wilson, Albia; Allan Kline, Vinton; R. R. O'Brien, Council Bluffs; George R. Call, Sioux City; Ross Burman, Burlington; Ralph Smith, Newton; L. A. Rowland, Waterloo; Mrs. Carl W. Reed, Cresco; Irving Nelson, Lake Mills; George D. Rose, Dubuque; Cable G. Von Maur, Davenport; Mrs. Frederick E. Frisbee, Sheldon; Howard Green, Cedar Rapids; A. A. Couch, Des Moines. Headquarters are maintained in the Crocker Building at Des Moines.

DUAL ORGANIZATION

Some confusion exists as to the identity of the Citizens Defense Corps and the Citizens Service Corps. The former, which on the national level was headed by Mrs. Roosevelt, includes in its functions such activities as victory gardens, food conservation and the like. This dual organization is carried on at a local level also, and we find in each county a Citizens Volunteer Committee and the Citizens Defense Corps. Enlistment in civilian defense work is accomplished through application to the Citizens Volunteer Committee, which coordinates the two branches.

STATE ORGANIZATION

Since we are concerned mainly with the Medical Emergency Service, let us see how it is integrated in the state civilian defense organization. Under the state coordinator, Mr. Rodney Q. Selby, we have six staff divisions, each headed by a chief, as follows:

1. Fire Defense—John Strohm, Chief. The functions of this division are: (a) the coordination of fire control activities; (b) the survey of equipment; and (c) the control of interchange of equipment and mutual aid.

2. Police—Karl W. Fischer, Chief. His duties are: (a) the coordination of traffic control; (b) highway patrol; (c) guarding of special defense points; (d) the interchange of men and material aid between counties; and (e) communications.

3. Air Warden. This division is headed by the assistant to the executive secretary; his functions are: (a) to train civilians; (b) to enforce black-outs; (c) to maintain fire watch; (d) to assist wounded individuals; and (e) to act as a clearing house for information and instruction on protective defense.

4. Emergency Public Workers—Fred R. White, Chief. The duties of this division include: (a) clearing roads and highways; (b) replacing signs; (c) clearing gas areas; and (d) coordinating interchange of equipment.

5. Emergency Utility Service—A. H. Wieters, Chief. The tasks of this division are: (a) the protection of water supplies, sewage disposal and sanitation; (b) public health engineering; (c) emergency service installations of gas, electricity and transportation; and (d) equipment interchange.

6. Emergency Medical Service—Dr. Thomas A. Burcham, Chief. The functions of this division are: (a) caring for the wounded; (b) establishment of first aid posts, casualty stations and hospitals; (c) surveys of equipment; and (d) coordination of mutual assistance between counties.

MEDICAL EMERGENCY COUNCIL

Each of the above mentioned divisions has its own advisory council. For the Emergency Medical Service, the advisory council is composed of the following members:

Thomas A. Burcham, M.D., Chairman
1104 Bankers Trust Building
Des Moines, Iowa

Edmund G. Zimmerer, M.D., Assistant
State Department of Health
Des Moines, Iowa

Walter L. Bierring, M.D.
Commissioner, State Department of Health
Des Moines, Iowa

Edward M. Meyers, M.D.
Representative, State Board of Health
Woodward, Iowa

Thomas F. Suchomel, M.D.
Chairman, Committee on Medical Preparedness
Iowa State Medical Society
Paramount Building
Cedar Rapids, Iowa

Miss Alma E. Hartz, R.N.
Nurse Representative
State Department of Health
Des Moines, Iowa

John E. Hogan
Assistant to Manager, American Red Cross
1709 Washington Avenue
St. Louis, Missouri

Robert E. Neff
Hospital Representative
University Hospital
Iowa City, Iowa

Mrs. Carl W. Reed
Representative, Iowa Industrial and Defense
Commission
Cresco, Iowa

LOCAL ORGANIZATIONS

Emergency Medical Service has now been organized in each county in Iowa by the appointment of a physician who serves as Chief of Emergency Medical Service and a nurse deputy, both of whom cooperate with the County Director of Civilian Defense.

In each county there is also a Medical Advisory Council, of which the Chief serves as chairman. This council is composed of one or more assistants to the Chief selected from local physicians, the local health officer, and representatives of the county medical society, nursing profession, hospitals, American Red Cross, and sometimes from other groups such as the American Legion, the Chamber of Commerce or civic clubs.

FUNCTIONS

During the preparatory or organization period it is the function of the local organization to set up and train personnel for emergency medical field units. The field unit consists of a squad of two teams, each squad being composed of two doctors and two nurses and two or more nurses' aides and orderlies.

Casualty stations should be set up in every part of the county. These are to supplement existing hospitals, and may be established in schools, churches or lodge halls. A survey of available beds or cots should be reported to Dr. Burcham. It is particularly important to arrange such stations at or near large industrial plants. The number required will depend upon the area and concentration of population. At or near some of

the casualty stations at least, provision for de-contamination centers must be arranged.

In brief, the Chief of Emergency Medical Service is responsible for the organization and training of medical field units and medical auxiliaries; for the organization of hospitals and medical and nursing personnel to serve the community needs resulting from enemy action; for the coordination of ambulance service, including volunteer auxiliaries; for the assignment of nurses' aides; for the coordination of the first aid training of other services, utilizing the assistance of various organizations such as the local chapters of the American Red Cross.

IN EMERGENCY

The Chief of Emergency Medical Service will provide for prompt reporting of all personnel at assigned posts of duty on receipt of a yellow warning, and for prompt assumption of their duties until such time as they are relieved on order of the commander. On report of incidents involving casualties, he will order the dispatch of medical field units subject to confirmation by the commander or executive officer. He will provide and maintain a map showing the location of hospitals, casualty stations, first aid posts, decontamination stations and medical supply depots. A copy of this map should be in the hands of the plotting officer. He will arrange for the compilation of a daily record of all new casualties and deaths from enemy action and will clear these records through the personnel officer to the proper municipal department. He, or a deputy authorized to act for him, must be constantly on duty at the control center.

OTHER PHYSICIANS

It is obvious that without unified action an enemy attack would result in chaos. The community interests are best served by the coordination of professional services. Hence, every physician must subordinate his own desires to the general good, and work with and under the chief of the service. It is true that we may never suffer enemy attack, but the organization of medical facilities and the training of personnel, especially auxiliary personnel, would also be of incalculable value in peace time disasters such as floods, fires or storms.

The value of our professional services to national security has never been so clearly demonstrated as in the present emergency. Hundreds of physicians are already in the armed forces. Those who remain have an obligation which they fully appreciate. This has been shown by the

comparatively rapid progress made in the organization of the Medical Emergency Division. However, only one hundred per cent cooperation will suffice, and until every physician, regardless of age or physical condition, has been assigned to a task suitable to his abilities the job will not be finished.

CONSERVATION OF DEALERS' STOCKS OF MEDICAL AND SURGICAL SUPPLIES

The Office of Civilian Defense in Washington, D. C., has issued the following statement in regard to conservation of medical and surgical supplies:

"The medical profession and the hospitals of the nation will shortly be obliged to depend upon dealers' stocks of medical and hospital supplies if they are to maintain their present level of efficiency. The continued shortage of raw materials makes it increasingly evident that even the armed forces may have difficulty in securing their requirements. Stocks on the shelves of the dealers of this nation constitute the only reserve of medical and hospital equipment which may be available in the near future to meet civilian needs. The hoarding and dead storage of equipment and supplies for a possible emergency should, therefore, be discouraged. Any unexpected emergency could be met by our present civilian medical and hospital resources; continued disaster could only be met by the utilization of military stores which would be made available if there were urgent need."

"Any surplus or obsolete equipment now in the possession of physicians and hospitals ought not to be dispersed at this time, because of the difficulty of replacement and the possibility that it may be needed for the establishment of emergency base hospitals."

PEPTIC ULCER FILM AVAILABLE

There is now available for free showings before groups of physicians the first complete movie film on peptic ulcer, in color and with sound track. The film is entitled "Peptic Ulcer" and was produced under the direction of the Department of Gastro-enterology of the Lahey Clinic of Boston. The American College of Surgeons has awarded its seal of approval to the film.

This is a sixteen millimeter film, the running time of which is forty-five minutes. It covers a presentation of the following problems of peptic ulcer: pathogenesis, diagnosis, treatment, pathology, complications including obstruction, hemorrhage and perforation, gastric ulcer, surgery and jejunal ulcer.

Arrangements for a showing of the film may be made by writing to the Professional Service Department of John Wyeth and Brother, Inc., Philadelphia, who will provide projection equipment, screen, film, and operator for medical groups, without charge.

SPEAKERS BUREAU ACTIVITIES

SCIENTIFIC RECORDINGS

The Speakers Bureau now has nine recorded medical lectures in its library which we should be happy to mail out upon request. These scientific transcriptions of talks by prominent physicians may be obtained for meetings of county medical societies, study clubs, hospital staffs, or other medical groups. Choose one of the following subjects for your next meeting:

The Diagnosis and Treatment of Anemia by Raphael Isaacs, M.D., Chicago; Sex Hormones: Clinical Application by Willard O. Thompson, M.D., Chicago; Care of the Premature Infant by Julius H. Hess, M.D., Chicago; Head Infections in Relation to General Practice by George E. Shambaugh, Jr., M.D., Chicago; The Macrocytic Anemias by William P. Murphy, M.D., Boston; The Diagnosis of Poliomyelitis by John A. Toomey, M.D., Cleveland; Diseases of the Gallbladder by R. Russell Best, M.D., Omaha;

Office Gynecology by Joseph L. Baer, M.D., Chicago; and Chest Injuries by Jerome R. Head, M.D., Chicago.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

October 7	Dangers in the Indiscriminate Use of Drugs	Donald C. Koser, M.D.
October 14	The Physical Examination	Gail A. McClure, M.D.
October 21	Upper Respiratory Infections	Alroy G. West, M.D.
October 28	The Control of Cancer	James C. Hill, M.D.

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF OCTOBER

Marshalltown Hotel Talleorn 6:30 p. m.	October 6	Treatment of Diabetes Paul H. Burgert, M.D., Chicago
Ottumwa Hotel Ottumwa 6:30 p. m.	October 6	Clinicopathologic Conference Richard F. Birge, M.D., Des Moines
Sheldon Arlington Hotel 6:30 p. m.	October 13	Office Urology William J. McMartin, M.D., Omaha
Newton Hotel Maytag 6:30 p. m.	October 13	Indications for Roentgen Therapy H. Dabney Kerr, M.D., Iowa City
Ottumwa Hotel Ottumwa 6:30 p. m.	October 20	Head Injuries Adrien H. Ver Bruggen, M.D., Chicago
Sheldon Arlington Hotel 6:30 p. m.	October 27	Diagnosis and Results of Surgical Treatment of Carcinoma of the Breast Stuart W. Harrington, M.D., Rochester
Eldora Cozy Coffee Shop 6:30 p. m.	October 27	The Present Conception of Nephritis Melvin W. Binger, M.D., Rochester

SCIENTIFIC RECORDING SCHEDULED FOR THE MONTH OF OCTOBER

Wayne County Medical Society Corydon—8:00 p. m.	October 13	The Macrocytic Anemias William P. Murphy, M.D., Boston
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WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee, Dexter, Iowa*

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

PUBLIC RELATIONS AND LEGISLATIVE COMMITTEES PLAN JOINT PROGRAM

The Public Relations and Legislative Committees have decided upon a joint program for the year. One of their objectives is to familiarize the public with the bill providing for compulsory vaccination against smallpox, which will be introduced in the legislature in January, 1943. Each Auxiliary member is urged to inform herself on the value and need for vaccination, and then make herself a committee of one to see the legislators of her own district, determine their attitude on the subject and supply them with any factual information which they might desire. The idea must be sold at every crossroad, and we must not undervalue our own influence. Legislators do pay attention to the attitudes of those voters who elected them.

This year, due to the growing shortage of doctors, we must use every available preventive medicine measure.

NOTES FROM FEDERAL LEGISLATIVE BULLETIN

On August 25 there was a bill introduced in the Senate, amending the Social Security Act, to make more money available for child health and welfare services during the war period. There was a sum of \$7,500,000 mentioned. Of this figure \$4,000,000 would be for maternal and child health in war production areas; \$750,000 for maternity care for wives of service men; and \$2,000,000 for extension of child welfare services in overcrowded areas. There has been a rapid increase in population in the industrial areas carrying on war production work. Overcrowded houses, trailer camps, lack of schools and recreation facilities, too few public health nurses and doctors and inadequate hospital facilities have upset the opportunity for children to develop into healthy normal adults.

There has been a study made during the past two years of the effect on children in defense areas, and Miss Katherine F. Lenroot, Chief of the Children's Bureau of the United States Department of Labor, lists these problems: (1) Need for health services and medical care for mothers and children, especially in defense areas; (2) Need for maternal care for wives of men in the armed forces (38 states requested financial help in providing adequate maternity care for these women); and (3) Need for child welfare services in defense areas to assist in dealing with problems of child neglect and juvenile delinquency.

This federal grant to the states under the Social Security Act will assist them in coping with these wartime conditions.

There is also a bill pending in the Senate Committee on Education and Labor providing for vocational rehabilitation of individuals suffering from war or other disabilities and return them to civil employment. Rehabilitation is defined as training given to render a disabled person fit for employment.

Another bill proposes to accord to the veterans of the present war the medical and hospitalization benefits made available to veterans of World War I.

A new law known as Public Law No. 654 prescribes the relative rank of members of the Navy Nurse Corps. The superintendents shall have the rank of lieutenant commander; the assistant superintendents (one for each three hundred nurses) shall have the rank of lieutenant; chief nurses, the relative rank of lieutenant (junior grade); and nurses, the relative rank of ensign. This law also provides that the members of the Navy Nurse Corps will have authority in and about naval hospitals next after the commissioned officers of the medical and dental corps.

There is a bill pending in the House which will make the services of chiropractic practitioners available to federal employees under the compensation act. In 1938 osteopathic services were made available, and now they wish to broaden the scope to include the chiropractors and treatments in chiropractic hospitals.

Mrs. J. A. Downing, Chairman
Legislative Committee

IOWA—A DISGRACE TO THE NATION

In 1939 Iowa reported 412 cases of smallpox; New York and her five neighbor states reported none. The reason for Iowa's disgrace is her lack of compulsory vaccination.

Last fall the Iowa Federation of Women's Clubs passed a resolution making its legislative committee responsible for writing a bill to make vaccination against smallpox compulsory in our state. The bill is to be introduced into the state legislature in January, 1943.

Your help is needed. Are you enough interested in the welfare of your state to give it?

Mrs. D. J. Glomset, Chairman
Public Relations Committee

BOOK NOTES

Fall publishing brings its usual extensive list of new titles. Doctors' wives will be especially interested in Margaret Baker's *They Also Serve: The Story of a Doctor's Wife*, in which she reviews her own experiences from the time of her husband's internship and the period of struggle which led to his ultimate success in surgery. The atmosphere of a doctor's home and the daily round of events provide a "behind-the-scenes" picture which will be of comparative interest to the profession and of general interest to the layman.

Since many doctors, and in some cases their families, are going to new temporary homes because of the war, Virginia L. Hunt's *How to Live in the Tropics* will be found a practical and indispensable handbook for those headed south. Her assistance in preparation came from staff members of the Rockefeller Foundation, the Gorgas Institute, the Pan-American Union and the Yale and Harvard Schools of Tropical Medicine. Enough said!

Also in line with tropical topics is Charles M. Wilson's *Ambassadors in White*. Disease has ever been the most imposing handicap to prosperity and solidarity there, and is of increasing importance to us since our own soldiers travel and live there now. This book presents the story of men from Carlos Finley, Walter Reed, and William Gorgas as ambassadors of good will who were doctors of medicine. *Ambassadors in White* is timely, worthwhile and intensely absorbing.

If you are asked to recommend a recent book on new-baby care, there is *Life With Baby* by Elizabeth Godwin and M. F. Martin. The authors undertake to answer the multitude of questions which disturb the new mother when she is "left on her own" with her bewildering offspring.

Mrs. K. M. Chapler

MEMBERSHIP FEES ARE DUE

Members of County Auxiliaries: If you have not paid your dues for this year, please do not neglect it longer; remit to your county treasurer at once.

Members-at-large: Your dues of one dollar for 1942-1943 should be sent to me immediately. If you became a member just previous to our last state meeting, your dues are paid up to and including the 1943 state meeting.

County Treasurers: Membership blanks will be mailed to you soon. If dues have been received for all your members, please fill in these blanks and return them to me with your state and national dues. The mailing list for the Woman's Auxiliary News is made from these names. Your members are entitled to receive this, so please help us keep our membership lists up to date. In these busy times, prompt return of the lists and your dues will be gratefully appreciated by your treasurer.

If you need membership cards, please write for them. Any service I can render will be a privilege.

Mrs. A. E. Merkel, Treasurer

SPEAKERS BUREAU RADIO SCHEDULE

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October 28	The Control of Cancer
	James C. Hill, M.D.

COMMITTEES OF THE WOMAN'S AUXILIARY

1942-1943

ADVISORY COUNCIL

Dr. James C. Hill, Chairman.....	Newton
Dr. John G. de Bey.....	Orange City
Dr. Edward A. Hanske.....	Bellevue
Dr. Carl B. Hickenlooper.....	Winterset

ORGANIZATION

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Mrs. Earl C. Montgomery.....	Atlantic
Mrs. Matthew J. Moes.....	Dubuque
Mrs. Cleanthus E. Birney.....	Estherville
Mrs. Frederick J. Swift.....	Maquoketa

PROGRAM

Mrs. W. A. Seidler, Chairman.....	Jamaica
Mrs. John F. Veltman.....	Winterset
Mrs. Robert S. Moth.....	Council Bluffs
Mrs. Lee E. Rosebrook.....	Ames
Mrs. M. C. Hennessy.....	Council Bluffs

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Mrs. Ernest C. McClure.....	Bussey
Mrs. Isaac Sternhill.....	Council Bluffs
Mrs. Soren S. Westly.....	Manly
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Mrs. Elbert T. Warren.....	Stuart
Mrs. William R. Hornaday.....	Des Moines
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Mrs. Lee R. Woodward.....	Mason City

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Mrs. Phillips E. Lohr.....	Churdan
Mrs. Floyd W. Ernst.....	New Albin
Mrs. Edward M. Victorine.....	Cedar Rapids

BULLETIN

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Mrs. Robert H. McBride.....	Sioux City
Mrs. Warren E. McCrary.....	Lake City
Mrs. Gorden N. Best.....	Council Bluffs
Mrs. Thomas L. Eland.....	Letts

NURSES LOAN FUND

Mrs. William R. Hornaday, Chairman.....	Des Moines
Mrs. Wilbert W. Bond.....	Des Moines
Mrs. Howard F. Clark.....	Stuart

HISTORIAN

Mrs. Edward L. Bower.....	Guthrie Center
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SOCIETY PROCEEDINGS

Dubuque County

The Dubuque County Medical Society held its September meeting at Leiser's Gardens in Dubuque with the following program: Rubin H. Flock, M.D., Associate Professor of Urology at the State University of Iowa, College of Medicine, presented New Concepts, Prophylaxis and Treatment of Urinary Calculi and illustrated his lecture with lantern slides. Jesse C. Painter, M.D., Dubuque, discussed Artificial Pneumothorax in the Treatment of Pulmonary Lesions with a demonstration of x-ray films. A reception was held for the doctors who were soon to join the armed services of the country. Those honored were Drs. Carl B. Hall, John J. Mueller, James W. Paulus and Charles J. Schueller, who were commissioned first lieutenants in the medical corps of the United States Army, and Dr. Robert Painter, son of Dr. Jesse C. Painter, who was commissioned ensign in the United States Navy.

Frank P. McNamara, M.D.

Floyd County

The Floyd County Medical Society met at the home of Dr. Hillard A. Tolliver in Charles City Saturday evening, August 15, for a dinner honoring six of its members who were soon leaving to go into military service. A fountain pen was presented to each of the honored doctors.

Greene County

The regular monthly meeting of the Greene County Medical Society was held at the Greene County Hospital in Jefferson Thursday, September 10. Following dinner Benjamin C. Hamilton, Jr., M.D., of Jefferson discussed The Interpretation of Pain in the Lower Right Thorax and Upper Right Abdomen.

John R. Black, M.D., Secretary

Iowa County

The Iowa County Medical Society met in Marengo Tuesday, September 8. Its guest speaker for the evening was Bernard C. Barnes, M.D., of Des Moines who discussed The Office Management and Treatment of Diseases of the Rectum. Mr. William E. Collins, Mead Johnson representative from Des Moines, presented several obstetric films.

Thomas D. Clark, M.D.

Polk County

The Polk County Medical Society met Wednesday, September 16, at Younkers Tea Room in Des Moines with the following program: Lewis M. Overton, M.D.,

Des Moines, discussed The Principles of Management of Traumatic Wounds and Earl C. Padgett, M.D., Kansas City, spoke on Burns and Other Traumatic Injuries. In order to fill vacancies created by doctors entering military service, Dr. Edward W. Anderson was elected Secretary-Treasurer to fill the term of Dr. Donald H. Kast expiring in January, 1943; Dr. Cecil C. Jones was elected Councilor-at-Large to fill the term of Dr. Emory L. Mauritz expiring in January, 1943; Dr. Fred Sternagel was elected Councilor-at-Large to fill the term of Dr. Joseph B. Priestley expiring in January, 1944; and Dr. Martin I. Olsen was elected Trustee to fill the unexpired term of Dr. Harold I. Bone, subject to his anticipated early call into military service.

The October meeting of the Society will be held Wednesday, October 21, at Younkers Tea Room in Des Moines, at which time the dentists are being invited to attend. Julian D. Boyd, M.D., Associate Professor of Pediatrics at the State University of Iowa, College of Medicine, will be the guest speaker for the evening. Dr. Boyd will open the meeting at 6:00 p. m. with a discussion on Tooth Decay. He will speak again following the dinner hour and at that time will talk on Nutrition.

Scott County

The Scott County Medical Society held its opening meeting of the fall season Tuesday, September 1, at the Lend-A-Hand Club in Davenport. The guest speaker of the evening was Raymond L. Traynor, M.D., Associate Professor of Medicine at Creighton University School of Medicine, Omaha, Nebraska, who spoke on Cardiac Infarction. The society decided not to suspend its activities despite the loss of several members who have joined the armed services. Dr. Sidney G. Hands was named temporary treasurer during the absence of Dr. Thomas W. McMeans, who is now in military service overseas.

John H. Sunderbruch, M.D., Secretary

Wapello County

The Wapello County Medical Society opened its series of fall postgraduate medical meetings in Ottumwa Tuesday, September 8, at Hotel Ottumwa. The guest speaker for the occasion was Alexander E. Brown, M.D., of Rochester, Minnesota, who spoke on The Sulfonamides. Physicians from the surrounding counties were invited to attend.

Webster County

The Webster County Medical Society sponsored a

brucellosis forum at Hotel Warden in Fort Dodge Thursday, September 17, to which the public was invited. The control and treatment of the disease in human beings and its eradication from dairy herds were discussed by Irving H. Borts, M.D., Associate Director of the State Hygienic Laboratory at Iowa City; J. A. Barger, D.V.M., from the United States Bureau of Animal Industry; J. A. Marchant, Professor of Bacteriology at Iowa State College in Ames; C. C. Franks, D.V.M., Chief of the Division of Animal Industry in Des Moines; Carl F. Jordan, M.D., Director of the Preventable Disease Division of the State Department of Health; and Lee R. Woodward, M.D., Mason City.

Woodbury County

The annual get-together party of the Woodbury County Medical Society was held Tuesday, September 15, at the Sioux City Country Club. The afternoon was spent playing golf and dinner was served at seven. No scientific program was planned for the occasion.

Wayland K. Hicks, M.D., Secretary

PERSONAL MENTION

Dr. Joe G. Fellows and **Dr. Lee E. Rosebrook** of Ames announce the formation of a medical partnership between themselves and Dr. Arthur N. Schanche of that city. Dr. Schanche has been on the college hospital staff at Iowa State College for the past several years and has just recently become associated with Drs. Fellows and Rosebrook.

Dr. Earl F. Weir of Council Bluffs spoke before the Kiwanis Club of that city Monday, August 24. He talked on the banking of whole blood and blood plasma and also discussed diseases which may be transmitted by transfusion.

Dr. James E. Murtaugh has become associated in the practice of medicine with Dr. Merle J. McGrane of New Hampton. For the past five years Dr. Murtaugh has been practicing in Charles City where he was associated with Dr. Charles W. McQuillen.

Dr. Charles E. Irwin, who has been practicing in Keota for the past year, has accepted an appointment to a United States war relocation project in Colorado. The Procurement and Assignment Service made arrangements whereby Dr. Kenneth McGuire of Richland would locate in Keota to serve that community's needs.

Dr. Dean W. Harman of Glenwood recently spoke before the air warden class of that city on gas warfare. He discussed the chemical basis of the various poisonous gases and gave the history of their development.

Dr. Robert V. Holman, assistant surgeon with the United States Public Health Service, recently began an assignment in Des Moines with the State Department of Health. His work, which will be in the industrial hygiene section of the public health engineering division, is expected to last for the duration.

Dr. Amos F. Johnson, formerly of Gresham, Nebraska, has located in Manilla where he has taken over the practice of Dr. Max Wetrich, who recently went into military service.

Dr. A. A. McGill of Omaha has located in Danbury and has taken over the practice of Dr. Lloyd H. Mattice. Dr. Mattice is now in military service and is stationed in Camp Livingston, Louisiana.

Dr. Elmer Lampe of Bellevue spoke before the subcommittee of the rural nursing service in that community Thursday, September 10, on Prevention of Communicable Diseases in Wartime.

MARRIAGES

Miss Elizabeth Noyes Cook, daughter of Mr. and Mrs. Roy A. Cook of Independence, and Dr. John R. Parish of Grinnell were married Saturday, August 29, in Independence. The couple will reside in Grinnell where for the past several years Dr. Parish has been associated in the practice of medicine with his father, Dr. Ora F. Parish.

DEATHS

Barnes, Elbert Maltby, of Gilman, aged sixty-seven, died September 9. He was graduated in 1901 from Northwestern University Medical School, Chicago, and at the time of his death was a member of the Marshall County Medical Society.

Frantz, Charles Peter, of Burlington, aged seventy-one, died August 21 following an illness of a few months. He was graduated in 1900 from Northwestern University Medical School, Chicago, and had long been a member of the Des Moines County Medical Society.

Southwick, William Warren, of Marshalltown, aged fifty-seven, died suddenly September 14. He was graduated in 1913 from the Chicago College of Medicine and Surgery, and at the time of his death was a member of the Marshall County Medical Society.

Wolfe, Channing Elmer, of Coon Rapids, aged sixty-four, died September 17. He was graduated in 1903 from Northwestern University Medical School, Chicago, and at the time of his death was a member of the Carroll County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. PAUL E. GARDNER, New Hampton

DR. JOHN T. MCCLINTOCK, Iowa City

DR. HENRY G. LANGWORTHY, Dubuque

DR. WALTER L. BIERRING, Des Moines

Medical History of Franklin County

WILLIAM R. ARTHUR, M.D., Hampton, Iowa

Franklin County is located in north central Iowa. It covers an area of 586 square miles and has a population of 16,379 persons. Hampton is its largest city and also the county seat.

The data for this history have been taken from the History of Franklin and Cerro Gordo Counties published in 1883, and from the History of Franklin County published in 1914. The data since that time are from my personal knowledge, interviews with others and court house records.

No profession has changed more since the first settlers arrived in Franklin County than the practice of medicine. There are many reasons for this change. In the early days patients were few and scattered, transportation was a serious problem, and the means of travel was generally horseback, due mainly to the fact that there were no roads. Guide posts were usually a tree, a grove, a light far off or a hill, and sometimes one just guessed where to go. As time elapsed roads became much better and then horses, buggies and cutters were the means of travel. A span of western horses or bronchos were the best because they could generally stand the abuse of long and fast drives.

Today we have the automobile, all-weather roads and the snowplow. Men of my age have had the bad experience of the cutter and sleigh, going over roads covered with snowbanks, water and ice. Today the snowplows help us to get through without much trouble, and in cases of emergency the roads are cleared at once.

The History of Franklin County, published in 1883, gives Dr. L. H. Arledge the distinction of being the first physician to practice in this county. Orson G. Reeve said, "Dr. Arledge attended the sick and met with a fair measure of success in relieving his patients of many ailments, but the impression always prevailed that Dr. Arledge was not a graduate of any school of medicine." He had a common school education and his knowledge of the principles of medicine was limited. Dr.

Arledge, as he shall be here designated, located in Maysville, then the principal trading point in Franklin County, in 1854, coming from Indiana. He was a member of the Methodist Episcopal Church and probably was the first one in the county to preach a regular prepared sermon. He lived there a few years and then moved to Mankato, Minnesota. Shortly after that, however, he returned, remained a few years and then moved to Nebraska. He later lost his life when he was run over by a wagon load of logs.

The first "regular" practitioner in the county was Dr. S. R. Mitchell, who located at Maysville in 1855. He was a very able and popular physician. In 1862 he moved to Ottumwa, where he later died and was buried.

Dr. Addis came to Franklin County and located near Maysville in 1856. After practicing there several years, he moved to Ponca, Nebraska.

Maysville was the first village in the county. The old school house is still standing, and this is all that is left of the town, except for a stone marker erected by the County Historical Society. The village was located on a hill five miles south of Hampton.

Because of the various locations of the doctors who came to Franklin County to practice medicine, I have enrolled them as they arrived in the town where they practiced medicine.

Hansell—Present population 183.

The pioneer physician to locate in Hansell was Dr. M. P. Brown, a native of Iowa and a graduate of the Keokuk Medical College in 1887. He located here in 1887 just after finishing his college course. He had a meager practice, since the village was much smaller then than it is now, and the surrounding community was sparsely settled. In 1898 he sold out to Dr. C. J. Musser and moved to Hampton where he resided and practiced for a few years and then moved to Davenport, Iowa. A few years later it was

reported that he had dropped dead while in the county treasurer's office in that city.

Dr. C. J. Musser, a native of Illinois and a graduate in 1898 of the Marion-Sims College of Medicine in St. Louis, Missouri, came to Hansell after buying out the practice of Dr. M. P. Brown. He practiced here for approximately five years, after which he moved to a small town near Fort Dodge and then later moved to Davenport.

In digressing, let me say I spent my boyhood days just two miles east of Hansell, and I well remember being one of Dr. Musser's first patients. I was taken suddenly ill with a severe pain at McBurney's point, which took several shots of morphine to quiet. In a short time I was about again, but I was bothered occasionally from then on with a duodenal ulcer, with copious hemorrhages at times. I was a follower of the Sippy treatment until July 1916 when my appendix became so filled with calcined magnesia that it flared up in defiance and was dislodged immediately. Pathology showed an appendix two by eight inches filled with a substance which looked like cement and was just as hard. I have had no ulcer flare-up since that time and consequently am a great believer that a bad appendix can cause ulcer trouble.

Geneva—Present population 268.

Dr. Charles Henry Tidd is credited with being the first regular physician who practiced in Geneva. He was born at Coolville, Ohio, October 28, 1847, and was graduated from the Medical College of Ohio in 1872. He located in Geneva in 1875 and had a large practice until he left in 1911 and moved to Marshalltown. He had practiced thirty-six years in Geneva and continued to practice in his new location until his death on October 27, 1927. He was buried in the Geneva cemetery.

Dr. A. E. Rogers, a native of Iowa and a graduate of Rush Medical College in 1881, located in Geneva in 1887. There is no record of the time he spent in Geneva or of his later welfare.

Dr. Jacob Krebbs, a native of Pennsylvania and a graduate of the State University of Iowa College of Medicine in 1886, located in Geneva shortly after graduation and practiced there but a short time. He moved to Hampton where he entered into practice with Dr. O. B. Harriman. While in Geneva Dr. Krebbs practiced medicine and also did barbering on the side.

Dr. Charles F. Mitchell, a native of Maryland and a graduate of Louisville Medical College in 1879, came to Geneva in 1893 and moved away in 1896.

Dr. Frank G. Carlson was born at Ackley, Iowa, February 18, 1878, and was graduated from Northwestern University Medical School in

Chicago in 1903. He came to Geneva that same year and remained there only a short time. He then moved to Thornton, where he practiced from 1903 to 1911. After leaving Thornton he went abroad and spent two years specializing in eye, ear, nose and throat work. He located in Mason City in 1913, where he is still practicing his specialty. About a year ago he accidentally fractured a hip and was laid up for some time, but he is now up and around again, doing his practice.

Dr. Frank L. Siberts was born January 11, 1879, at Winfield, Iowa, and was graduated from the State University of Iowa College of Medicine at Iowa City in June 1904. He located that same year in Geneva, where he has now practiced thirty-eight years. At present he is the only physician in the town. Dr. Siberts played football on Iowa's great team of 1900, when no other school crossed their goal line during the season, a record that has never been equaled.

Popejoy—Present population 199.

Dr. A. L. Hoyt came to Popejoy in 1896 and remained about three years. No further record of his activities could be found. He is supposed to have been the first physician in this town.

Dr. Philip Vail Ketchum, a native of Iowa who was graduated from Fort Wayne College of Medicine in Fort Wayne, Indiana, in 1902, located in Popejoy soon after graduation. He later moved to Dows, Iowa.

Dr. G. B. Palmer, a native of Iowa, also located here in 1907 or near that time. Any further history of this physician was not available.

Dr. William G. Morton, a native of Iowa, was born in 1883 and was graduated from the State University of Iowa College of Medicine in 1905. He located in Popejoy in 1908 and remained only a year. He then moved to Iowa Falls and became associated in practice with his father and brother. When he moved from Iowa Falls, he went to Winslow, Arizona, where he is still in active practice.

At present there is no physician in Popejoy.

Bradford—Present population 100.

Dr. L. E. Fraser, a native of Franklin County, was born February 18, 1880. He was graduated from the Keokuk Medical College in 1905 and located in Bradford shortly after that time. He practiced there until 1929 when he moved to Iowa Falls, where he practiced until his death in February, 1938. He was buried in Maysville cemetery in this county.

As far as I could learn he was the only physician who practiced in Bradford. The town has been without a physician since 1929, when Dr. Fraser went to Iowa Falls.

Alexander—Present population 324.

Dr. Daniel Lewis Youngs, a native of Ohio and a graduate of Drake University College of Medicine in 1895, came to Alexander soon after he graduated. He apparently was the first medical man to practice here.

Dr. J. W. Lehan, a graduate of Rush Medical College in 1897, came to Alexander in 1900. He practiced here about five years and then sold out to Dr. W. D. Leach. Dr. Lehan moved to Greeley, Colorado, where he is still in active practice.

Dr. W. D. Leach, a native of England, was graduated from the College of Physicians and Surgeons in Chicago in 1895. He came to Alexander and took over the practice of Dr. J. W. Lehan when he moved to Colorado.

There was also a Dr. S. M. Mann in Alexander during 1896 and 1897. No further record was available.

Dr. H. B. Cragin, a graduate of Rush Medical College in 1901, came to Alexander in 1904 from Chapin, Iowa. He remained less than a year and then moved to Chicago, where he later died of pneumonia.

Dr. E. A. Warner, a native of Iowa and a graduate of Keokuk Medical College in 1905, came to Alexander shortly after graduation. He remained but a short time, however, and then moved to Nevada, Iowa.

Dr. Merle C. Rockwood, a native of Minnesota, was born April 16, 1879, and was graduated from the State University of Iowa College of Medicine in 1908. He came to Alexander in the spring of 1910 and remained until 1916, when he moved to Renwick, Iowa. He practiced there for many years until his health failed. He died in Renwick on November 26, 1937, and was buried in the Vernon cemetery near that town.

Dr. Frederick H. Rodemeyer, a native of Franklin County, was born March 14, 1876, and was graduated from the State University of Iowa College of Medicine in 1904. He practiced in Alexander from 1914 to 1918, when he enlisted in the World War. He is now practicing at Sheffield in this county.

Dr. Clarence P. Phillips, a native of Iowa, was born in Mason City on November 15, 1896. He was graduated from the State University of Iowa College of Medicine in 1922. He came to Alexander in 1924 from Clear Lake, and then moved in 1927 to Muscatine, Iowa, where he is still in practice.

A Dr. Wrenn and a Dr. Hefflan are known to have practiced in Alexander, but there were no records available pertaining to their activities.

Coulter—Present population 236.

Dr. George E. Schnug, born in Galesburg, Iowa, on February 3, 1884, was graduated from the Rolfe high school in 1905, and from the State University of Iowa College of Medicine in 1910. He located in Coulter on July 12, 1910, and moved to Dows on April 22, 1911, where he is still in practice.

Dr. Gustave A. Everson was born in Grant County, Wisconsin, on January 3, 1885, and was graduated from the State University of Iowa College of Medicine in 1910. He practiced medicine in Coulter from 1911 to 1914 when he moved to Plover, Iowa. He remained there until 1933, when he moved to Rolfe, Iowa, where he is still in active practice.

Dr. Arthur A. Rhonaldt practiced medicine in Coulter from 1914 to 1916. He then moved to Hampton where he was associated with the Hampton Clinic for a few months. He moved from Hampton to Cedar Falls, Iowa.

Dr. W. L. Savage came to Coulter in 1924. He practiced there about a year and a half and then moved to Wisconsin.

(To be continued next month)

POLICIES GOVERNING INITIAL APPOINTMENT OF MEDICAL OFFICERS

(Continued from page 468)

value to the military service, in lieu of the foregoing.

2. Applicants previously commissioned as majors in the Medical Corps (Regular Army, National Guard of the United States or Officers Reserve Corps) whose training and experience qualify them for appropriate assignments may be considered for appointment in the grade of major provided they have not passed the age of 55.

Lieutenant Colonel and Colonel.—In view of the small number of assignment vacancies for individuals of such grade, and the large number of reserve officers of these grades who are being called to duty, such appointments will be limited. Wherever possible, promotion of qualified officers on duty will be utilized to fill the position vacancies.

There are in the group between 24 and 45 years of age more than a sufficient number of eligible qualified physicians to meet the Medical Department requirements. It is on this age group that the Congress has imposed a definite obligation of military service through the medium of the Selective Service Act. The physicians in this group are ones needed now for active duty. The requirements are immediate and imperative. Applicants beyond 45 years may be considered for appointment only if they possess special qualifications for assignment to positions appropriate to the grade of major or above.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schaufler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

GYNECOLOGY AND FEMALE ENDOCRINOLOGY—By Emil Novak, M.D., associate in gynecology, The Johns Hopkins Medical School. Little, Brown and Company, Boston, 1941.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.

ENDOCRINOLOGY: CLINICAL APPLICATION AND TREATMENT—By August A. Werner, M.D., assistant professor of internal medicine, St. Louis University School of Medicine. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

VAGINAL HYSTERECTOMY—By James W. Kennedy, M.D., surgeon-in-chief to the Joseph Price Hospital, Philadelphia; and Archibald D. Campbell, M.D., assistant professor of obstetrics and gynecology, McGill University. F. A. Davis Company, Philadelphia, 1942. Price, \$10.00.

MANAGEMENT OF THE SICK INFANT AND CHILD—By Langley Porter, M.D., dean emeritus, University of California Medical School; and William E. Carter, M.D., director of University of California Hospital. Sixth edition. The C. V. Mosby Company, St. Louis, 1942. Price, \$11.50.

BOOK REVIEWS

THE MICROBE'S CHALLENGE

By Frederick Eberson, M.D., director of laboratories, Gallinger Hospital, Washington, D. C. The Jaques Cattell Press, Lancaster, Pennsylvania, 1941.

Many scientific subjects have been popularized by still more writers in recent months. At best it is a difficult task to make scientific subjects readable for the average person. It is still more difficult to simplify the subject without sacrificing accuracy. This, apparently, the author has done. Moreover, he has avoided that greatest of all pitfalls, the tendency to "talk down" to the reader.

Dr. Eberson shows us very clearly that, with all our advances in bacteriology and its allied sciences, we have only scratched the surface, that there are many weak spots in our protective armor and that, because of the adaptability and versatility of the "microbes," new problems are constantly being presented. Truly, the activities of these ever-present forms of life will bring out the very best that medicine, public health and all science can muster before they will be brought under control.

Every person who has even a small interest in health and how it can be maintained will find the story of the world-wide battle against bacteria curiously analogous to the global war in which man is now engaged.

We congratulate the author for presenting a readable and interesting account of his subject without sacrificing accuracy or authenticity. The book is thought-provoking.

R. M. S.

THE CARE OF THE AGED

By Malford W. Thewlis, M.D., attending specialist, General Hospital, United States Public Health Hospitals, New York. Fourth edition, thoroughly revised. The C. V. Mosby Company, St. Louis, 1942.

During the present days of all-out war, with most of the younger men in service or going in soon, geriatrics and pediatrics will play ever increasing parts in the duties of the physicians and surgeons who carry on at the home front.

This book by Dr. Thewlis is the fourth edition. It contains many changes and now includes sections on chemotherapy and respiratory infections. It should be heartily welcomed by all members of the medical profession.

E. B. W.

ESSENTIALS OF GENERAL SURGERY

By Wallace P. Ritchie, M.D., clinical assistant professor of surgery, University of Minnesota Medical School. The C. V. Mosby Company, St. Louis, 1941. Price, \$8.50.

This book by Ritchie and his colleagues at the University of Minnesota was written primarily for undergraduate students of surgery, and for them it can be recommended as a volume which sets forth the essential principles of surgery in a well-organized, concise manner. The elimination of controversial discussions regarding etiology, pathology and methods of treatment make it easy for the student to

grasp the fundamentals which must be learned at the beginning in a study of a complicated subject.

Technical details of treatment have been considered outside the province of the undergraduate student and hence are not included in the text. However, the indications for treatment of the various pathologic conditions are discussed briefly. The chapter on surgical technic acquaints the student with the more common types of instruments, sutures and antiseptics, and discusses adequately the administration of fluids including blood and plasma, intragastric suction, paracentesis, spinal puncture and other essential diagnostic procedures. The discussion of anesthesia by Knight, while brief, contains an enormous amount of information. The various types of anesthesia are considered in a concise manner. Doctor Creevy has written an excellent introduction to the subject of urology, which covers the field thoroughly. Many of the chapters, particularly those on the biliary system, the stomach and duodenum, the autonomous nervous system, and the spinal cord, are preceded by brief yet adequate discussions of the anatomy and physiology of the structures involved. The chapter on orthopedics by Shimonek serves as a good introduction to that subject. The chapter on fractures and dislocations by Evans is unusual in that it is in outline form, yet it contains much useful information concerning the pathology and treatment of the various types of fractures.

The print in the text is large and easy to read; its headings are set in bold face type which makes it easy for the reader to pick out the information he wishes. The book is adequately illustrated. As a textbook for students it will prove a useful volume, but the lack of detailed discussion regarding etiology, pathology and treatment will definitely limit its usefulness as a reference book for graduate students and the general surgeon.

H. I. D.

THE CONQUEST OF BACTERIA

By Mr. F. Sherwood Taylor. Alliance Book Corporation, New York, 1942. Price, \$2.00.

All of the newspaper accounts and many of the "scientific" articles dealing with the new chemotherapeutic agents have served only to confuse. Hopes have been raised only to be dashed to pieces and good products have been discarded for some time before their true worth is established.

This book will go far to clear up much of the confusion surrounding the recent advances in chemotherapy. Here is a factual account of the action of chemical agents on the human body and its response to them all, leading to disease cure. In clear concise terms which are easily understood, the whole book seems to say: "There are many chemical agents which will help the body fight disease but there is no such thing as a cure-all." More books popularizing scientific subjects in this manner are needed.

R. M. S.

SYNOPSIS OF THE PREPARATION AND AFTERCARE OF SURGICAL PATIENTS

By Hugh C. Ilgenfritz, M.D., instructor in surgery, Louisiana State University School of Medicine; and Rawley M. Penick, Jr., M.D., professor of clinical surgery, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

This volume is intended as a practical guide in the care of surgical patients throughout their stay in the hospital. The authors have succeeded in presenting a very complete outline which will serve as a guide for the adequate preparation and aftercare of any surgical patient. The pathogenesis of each of the various complications is discussed in a most interesting manner. The text is more than a simple enumeration of the various steps in the preparation and aftercare of surgical patients. It is very interesting and valuable reading material for the surgical resident and the active general surgeon.

Chapter eight is an excellent discussion of organic diseases and their relation to surgical operations. The organic diseases are no longer considered contraindications to the imperative operative procedures when team work is employed both before and after the operation. Many conditions become operable which formerly were considered inoperable. The appendix contains a valuable discussion of the newer chemotherapeutic agents which is most timely. It is a worthwhile volume and deserves a place in any medical library.

G.M.C.

THE EYE MANIFESTATIONS OF INTERNAL DISEASES

By I. S. Tassman, M.D., associate professor of ophthalmology, Graduate School of Medicine, University of Pennsylvania. The C. V. Mosby Company, St. Louis, 1942. Price, \$9.50.

This book deserves a place in the working library of every ophthalmologist and general practitioner. As the author states, the first five chapters are primarily for one inexperienced in ophthalmology, the beginner, or one who desires to gain a better appreciation of eye manifestations. The following chapters cover in a concise manner the ocular manifestations associated with most of the human diseases. The chapter headings and subdivisions are well chosen with the exception of the title of Chapter V.

The bibliography is excellent, and the index is exceptionally well done for practical reference. The author is to be commended for the amount of information he has been able to incorporate in one volume; his style is concise and clear. Treatments suggested include the latest developments in therapy. Particularly for the busy practitioner, this single volume for quick reference deserves a widespread acceptance by ophthalmologists and those in general practice.

G. F. H.

COLLECTED PAPERS OF THE MAYO CLINIC

Edited by Richard M. Hewitt, M.D., and
 A. B. Nevling, M.D. Volume XXXIII, 1941.
 W. B. Saunders Company, Philadelphia,
 1942. Price, \$12.00.

No better description of this book can be written than that found in the foreword. "This volume contains papers written by members of the staff of the Mayo Clinic and the Mayo Foundation, and by fellows of the Mayo Foundation, from December 1, 1940 to November 30, 1941. These articles are of interest to the general practitioner, diagnostician and general surgeon."

The ten papers on aviation medicine are of special importance during war time. Here is a group of articles by men making an intensive study of the subject, with all necessary laboratory facilities and a large number of patients from whom to draw conclusions. This book should prove of value to all practitioners.

E. B. W.

SOLVING SCHOOL HEALTH PROBLEMS

By Dorothy B. Nyswander, Ph.D. Sponsored by the Department of Health and the Board of Education of New York City. The Commonwealth Fund, New York, 1942. Price, \$2.00.

In 1936 a comprehensive study was begun of the school health work in the Astoria Health District of New York City. Throughout the four-year period of study the main objective was to find "the effective utilization of organized effort for the better health of school children." At the onset of this experimental study a description was made of the average medical setup in the school system, which was not unlike many of the school programs throughout the country:

"The child has removed his clothing to the waist and the physician proceeds with his examination. The mother looks a bit anxious when the physician listens carefully to the child in a sitting and reclining position as he goes over the heart and lungs. As soon as he has finished noting results on the medical card, he takes a printed form from the desk and writes 'tonsils.' He signs his name on the form and hands it to the mother saying, 'Take this to your doctor—your boy has bad tonsils.' The mother in complete surprise says, 'Why, my boy has never been sick.' 'Well,' replies the physician, 'you take this slip to your doctor and have him give us a report. The nurse will explain it to you.'

"Only four mothers came this morning. Two of the mothers had asked him questions which slowed up the work. The physician worked much faster with the six youngsters whose mothers were not present."

Before this experimental study the routine procedure was to examine all children on admission to school and again all children in the eighth grade. The new procedure was to examine children referred

to the physician after consultation of the school nurse and teacher. As a result of such selection, it was concluded that "parents were as likely to be present at the examination of older children as at the examination of entering children; the proportion of adverse conditions found in specially referred cases was almost twice that found in children selected routinely by grade; a larger proportion of children who are below par were found in the specially referred or older group."

Another gain to the new system of examination was the finding that "presence of parents at the medical examination is instrumental in securing professional attention." Furthermore, it was found that "the children whose parents were present at the examination required less follow-up by the nurse than those whose parents were not present."

The major portion of the book is devoted to minute details of the reorganization of the school health program. These details would be of primary interest to directors of similar school programs. The chief value of the book is the demonstration that a school health examination based on referral from teachers and the school nurse results in securing more effective professional services for the individual child.

C. F.

NEUROANATOMY

By Fred A. Mettler, M.D., professor of anatomy, University of Georgia School of Medicine. The C. V. Mosby Company, St. Louis, 1942. Price, \$7.50.

This is one of the few practical and yet well illustrated textbooks upon neuroanatomy which the reviewer has had the privilege of encountering. Instead of confusing the student mind with a detailed description upon neuro-embryology, the subject matter is presented in a concise and yet comprehensive manner. The work upon the diencephalon will be particularly useful to the neurologic student.

The book is designed primarily for medical students but is a valuable addition to the library of any neuro-anatomist, neurologist or neurosurgeon.

W. D. A.

GYNECOLOGY AND FEMALE ENDOCRINOLOGY

By Emil Novak, M.D., associate in gynecology, The Johns Hopkins Medical School. Little, Brown and Company, Boston, 1941.

Several years ago the author brought forth a new text "Gynecological and Obstetrical Pathology" which might well serve as a necessary preface to this excellent clinical text of recent origin. Dr. Novak discusses the usual gynecologic conditions but directs particular emphasis throughout the book to the endocrine disturbances coming or associated with these pathologic conditions. The text, together with its companion volume, should give both student and practitioner an excellent up-to-date concept of gynecology and female endocrinology. A. W. B.

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CERTAIN PECULIARITIES OF GALLSTONE DISEASE*

REGINALD FITZ, M.D., Boston, Massachusetts

Among the last of the papers written by my father¹ was one entitled "The Early Diagnosis of Gall Stones." He read this in the fall of 1908 before the Medical Association of Hartford County, Connecticut. It is of chief interest because it illustrates how physicians and surgeons of his generation were apt to regard this common disorder. It was generally admitted, he said, that several factors were concerned in the formation of gallstones, the most notable of which was a combination of stagnation of bile, infection of the bile passages and unknown disturbances of metabolism termed, for want of a better word, predisposition. Unless one draws upon this unknown factor of predisposition, it was difficult to comprehend exactly why stones should form in the presence of stagnant bile and infection. After admitting the factor of predisposition, however, it was easy to imagine how stones might be formed through the accessory influence of the other agents.

Stones were able to develop with surprising rapidity under proper circumstances. For example, Dr. John Homans² emptied a patient's gallbladder of stones and symptoms of colic recurred twenty months later. At a second operation, which was soon performed, seven well-grown stones were present, five of which were attached to silk sutures left in the gallbladder from the previous operation. Dr. Homans attributed this to a precipitation of cholesterol from around the sutures "just as alum will crystalize as it cools around pieces of string suspended in it."

The gallbladder, besides forming stones, was able to rid itself of them. In 1900 Dr. Maurice Richardson³ reported the case of a patient with acute intestinal obstruction due to a large gallstone which seemingly had entered the bowel without causing any symptoms. Probably, therefore, the bile ducts had the power of dilating and large

stones might be passed without any particular inconvenience to the patient.

In my father's time the x-ray was of little help. About all to be said then of this newfangled machine was that the conjoint use of the ray and the internal administration of bismuth were of some advantage in observing the motor functions of digestion. It promised to be of little or no value in the visualization of gallstones. Their diagnosis, therefore, was not made easily. The presence of these foreign bodies was suspected by what they made the patient feel rather than by what they made him show, and often their history was bizarre and atypical. It is no wonder, therefore, that in those days not many gallstones were recognized in the early stages and that it was a diagnostic triumph for the internist when the surgeon demonstrated that gallstones actually were present in the gallbladder of a patient, without biliary obstruction, who was subjected to operation because of their suspected presence.

If one attempts to draw a thumbnail sketch of the history of gallstones since that paper was published, one must emphasize developments in surgery, radiology, biochemistry and experimental medicine. Proper harmony of these developments has made it possible now for any third year medical student to recognize gallstones assuredly and in an offhand fashion, which remains a constant source of wonder to older clinicians who go back to the days when their identification was a diagnostic feat of the first order.

The development of gallbladder surgery has been most spectacular. Very little surgery of this nature was attempted before 1890, but at about that time surgeons realized gallstones might be approached directly. The first operation on the gallbladder at the Massachusetts General Hospital⁴ was performed in 1888. In 1892 Dr. Maurice Richardson⁵ wrote an article in which he reported six cholecystectomies for gallstones. In 1893, Dr. W. J. Mayo⁶ was able to add that he had operated in seven cases. From such small beginnings there have grown up many careful

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studies on gallbladder surgery, and operative technic has become fairly standardized, making this field of surgery one which is neither particularly hazardous nor peculiar.

The discovery by Graham and Cole⁷ in 1924 of a radiopaque dye made visualization of the gallbladder possible and has had even more far-reaching results. Cholecystography now places in the hands of everyone a simple test which yields correct diagnoses with but a small margin of error.

The work of the physiologists in biochemistry and experimental medicine also has led to a much clearer conception of gallstones. It is widely accepted now that the rôle of infection in the formation of gallstones is less significant than was formerly thought and that the part biliary stasis may play in their production is less certain. The unknown disturbances of metabolism which lead to their formation are more sharply defined.

When methods of blood chemical analysis became popular, cholesterol received much attention. People thought high blood cholesterol values must lead to a high concentration of it in bile and that cholesterol stones were formed by simple precipitation of this substance from a supersaturated solution. Soon, however, evidence was assembled that there was no especial relationship between cholesterol in the blood and gallstones. Diseases characterized by high cholesterolemia, such as myxedema, were not commonly complicated by gallstones; in fact, gallstones appeared without any demonstrable relation to the blood cholesterol concentration.

Human gallstones were implanted into the gallbladders of dogs and were observed to disappear with surprising speed. In 1930 Walsh and Ivy⁸ determined the rate of dissolution of human gallstones in dogs under varying conditions. They found that the rate of solution of a human gallstone in the dog's gallbladder was not significantly altered by feeding high fat or high cholesterol diets, although factors which diminished the flow of bile in and out of the gallbladder decreased the rate of solution. They began to study bile chemistry and eventually concluded that the solubility of cholesterol in bile depended on the activity of the bile salts or acids in holding the fats and fatty acids in aqueous solution.

Andrews and his co-workers^{9, 10 and 11} explored the same field and developed a somewhat different hypothesis. They thought gallstones developed from abnormalities of bile salt metabolism, which permitted the precipitation of cholesterol held in solution by the bile salts and thus formed stones. Dolkart, Jones and Brown^{12 and 13} disagreed with this interpretation and confirmed the earlier work

of Walsh and Ivy. They believed that the fatty acids rather than the bile salts played the most significant rôle in maintaining cholesterol in solution.

Work of this nature points out the path which those who investigate gallstone disease tend to follow. The factor of predisposition, which was puzzling to my father, appears more and more as an anomaly in biliary chemistry. The liver seems to be more at fault in producing gallstones than the gallbladder. It is apparent that gallstones are due mainly to physical and chemical changes in the composition of the bile; nevertheless, their mode of origin is still uncontrolled and they continue to be formed with considerable frequency.

It has seemed to me that one might acquire interesting clinical information if one were to study the life history of uncomplicated gallstones in human beings, observing how they first become apparent and what happens to them if they are left alone. The technic for a study of this nature is simple: First, one must obtain evidence that the persons to be studied do not have gallstones when the study is begun; then one must follow such patients for varying lengths of time to observe the development of stones; and finally, in those individuals in whom stones develop one must determine what happens as time goes on. I have been able to assemble a small group of cases which have been studied more or less adequately in this manner. They serve to illustrate the possibilities of the problem which I have outlined and some of its complexities. These cases are the basis for this report.

It is by no means an easy matter to predict which patients, apparently healthy now, will develop gallstones a few years hence. The first case to be presented affords an example of the difficulties which may be encountered from this viewpoint.

CASE REPORT I

Mrs. R. is a woman who has every right to be regarded as likely to develop gallstones. She is middle-aged and obese; she has suffered from typhoid fever; she has been through several pregnancies; she is diabetic; and she complains of recurrent attacks of right upper quadrant pain complicated by ill-defined chronic indigestion, which is always aggravated by fried or greasy foods. Three cholecystograms have been made during the last six years and, as can be seen, the last is fully as normal as was the first. At the moment she appears not to have gallstones, although she continues to complain of recurrent attacks of right upper quadrant pain complicated by a chronic ill-defined indigestion. This does not mean, however,

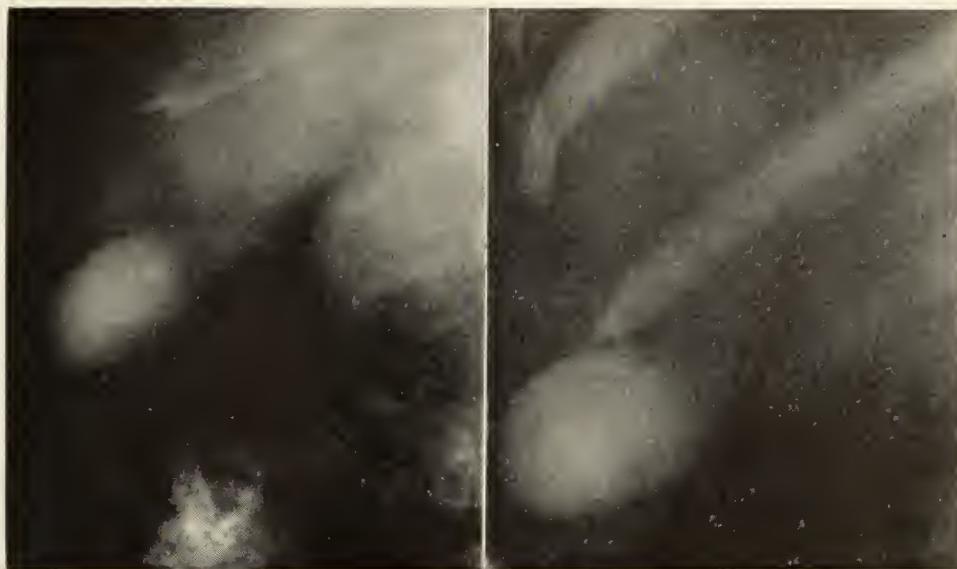


Fig. 1. Normal cholecystograms at six year intervals in a patient regarded as likely to develop gallstones.

that gallstones may not develop in the future and with surprising rapidity. As has been mentioned, the patient of Dr. Homans developed gallstones in less than two years after an operation. HARRIES¹⁴ described a case in which two stones were removed and in which biliary colic returned three months later. At the time of a second operation about a year after the first, over a dozen stones were removed from the gallbladder. Such experiences are not unusual.

The perplexing part of a patient like Mrs. R. is that she gives a history of gallstone disease

without stones being demonstrable. If she should develop them in the future, what assurance is there that gallstones have anything to do with her symptoms? We need more critical surveys of the symptomatology of gallstones in their early stages before we can speak intelligently of how they behave and how they should be treated.

CASE REPORT II

My second case illustrates more satisfactorily how the formation of gallstones may be observed by utilization of clinical methods now available.



Fig. 2. Gallstones developing under observation during a twelve month period.

This patient was a woman thirty years of age, who came to the Peter Bent Brigham Hospital in 1934. She said that for several years she had been bothered by indigestion, which was chronic and spasmodically painful. Cholecystograms were normal, yet she had radiologic evidence of a duodenal ulcer.

A year later she returned; she still complained of indigestion, which continued to be painful at times. Cholecystograms at that time revealed she had developed a great many gallstones. The gallstones and gallbladder were removed, and an indurated, scarred area on the anterosuperior duodenal surface confirmed the radiologic diagnosis of ulcer.

Four months after this operation she returned for a third visit. She continued to complain of chronic indigestion, which was spasmodically painful with the pain being referred to the right upper quadrant and radiating into the back. She seemed to feel no better than she did before the operation. Why did she develop gallstones? What was their cause? How could their formation have been prevented? What symptoms did they produce?

It is particularly important to know the natural history of uncomplicated gallstones in their early stages, because as knowledge advances the possibility of treatment by medical means rather than by surgery becomes more hopeful. Therefore, it is gratifying to make the proper decision concerning whether or not to operate in a given instance.

CASE REPORT III

Three years ago an x-ray examination of a patient revealed a gallstone. This finding was purely incidental and there seemed no good reason to do anything about it. During the past three

years the patient has felt perfectly well. The x-ray now reveals the stone is less dense than it was. Is something happening and as a result of this the stone has begun to dissolve?

The fact that gallstones may dissolve in vivo as well as in vitro is suggested more strongly by two other cases, one seen in the Peter Bent Brigham Hospital and the other observed by Dr. Allen G. Rewbridge in Minneapolis.

CASE REPORTS IV AND V

The patient at Brigham Hospital had polycystic kidney disease with concomitant chronic acidosis and uremia. A year before her death an x-ray examination revealed several faint shadows in the gallbladder region which Dr. Merrill Sosman informed me were entirely characteristic of gallstones. At necropsy the gallbladder was not distended and contained no calculi. What became of them?

Dr. Rewbridge's patient was a young woman who was pregnant at the time the cholecystogram was made. Eighteen months later she had an acute attack of appendicitis. She was operated upon, and at that time her gallbladder was removed. It contained no stones and appeared normal on histologic examination. What had become of the stones?

A few years ago interesting studies were carried on almost simultaneously by Dr. Rewbridge¹⁵ and by Drs. Brown and Dolkart¹⁶ of Chicago. Independently these investigators wondered whether medical treatment of gallstones was possible and they had the courage to attempt it. Their method of treatment was much the same. Rewbridge tried to keep cholesterol in solution by feeding his patients bile salts each day and to stimulate the flow of bile by the regular use of olive oil. Brown and Dolkart used ketocholanic acid to stimulate the



Fig. 3. Slight change in the appearance of a gallstone possibly undergoing spontaneous dissolution. The first film was made in 1938, the second in 1941.



Fig. 4. Two cases in which gallstones disappeared spontaneously as proved by necropsy or operation.
(a) Case from the Peter Bent Brigham Hospital.
(b) Dr. Allen Rewbridge's case.

flow of bile, and hourly feedings of milk and cream to stimulate emptying of the gallbladder. Rewbridge had two cases "in which gallstones seemed to disappear" under his form of treatment, and Brown and Dolkart observed "a few cases in which stones were reported in the first Graham-Cole test but they were not in evidence on succeeding visualization."

To offset such apparently successful results of

medical treatment are three cases in Boston which are equally interesting since they recovered without any specific treatment. One was from the Massachusetts General Hospital which Dr. Aubrey Hampton has permitted me to describe; one was from the Boston Dispensary which Dr. Alice Ettinger has placed at my disposal; and one was from Beth Israel Hospital which Dr. William S. Altman has been kind enough to submit.



Fig. 5. Gallstones which disappeared. Operation revealed a normal gallbladder. (Case from Massachusetts General Hospital.)

CASE REPORTS VI, VII AND VIII

The patient at Massachusetts General Hospital was found to have gallstones by cholecystography. She was advised to have an operation but postponed it. Some time later she returned for another examination and the previously observed stones had disappeared. In spite of the second negative gallbladder examination, an operation was performed and no stones were found in the gallbladder.

The Boston Dispensary patient seemed to have a great many stones, as judged by the cholecystogram, yet five years later they were no longer recognizable.

A cholecystogram of Dr. Altman's patient presented characteristics of cholelithiasis. A year and a half later the cholecystogram was negative.

These cases are sufficient to illustrate the point of my argument. Clinical methods are now available by which it is possible to study in human beings the development of gallstones and their behavior before they cause easily recognized symptoms. As was known to older observers, they may develop with surprising rapidity. Once present they may disappear, a fact which was also well known to older clinicians but which recently has received little emphasis. The stones may be passed through the common bile duct without producing any definite symptomatology, or perhaps they may be dissolved through change in the chemical composition of the bile.

At the present moment the usual teaching is that the majority of gallstones are best treated by

surgery. An eminent authority, Dr. Frank Lahey,¹⁷ has said of this disease that early operation gives better end results and a lower mortality rate than if patients are permitted to pass through numerous attacks of colic. Cheever¹⁸ also voices this opinion because he, too, believes that gallstones are never harmless and that they inevitably tend to serious and perhaps fatal complications. Leading medical opinion expresses an attitude of mind much like this, seemingly modified by local custom. Christian¹⁹ of Boston supports his surgical colleagues. In his judgment the proper treatment of gallstones is surgical rather than medical as a general rule. He believes regrets are rare when an early operation is performed and common when it is delayed. Musser²⁰ says that although there is no method whereby gallstones can be dissolved or made to pass into the duodenum, it is doubtful if surgical interference is indicated for the first or even the second biliary colic if evidence of infection is lacking. When the attacks come frequently, however, an operation is advisable if the patient's condition will permit it. Meakins²¹ goes a little further in postponing surgery. He says that an operation is not indicated for the first, second or even several attacks of colic, since there may be lengthy intervals of freedom from attack and the disability from an occasional colic may be relatively insignificant compared to the risk of an operation. On the whole, however, he also feels that eventually the best treatment of gallstones is surgical rather than medical.

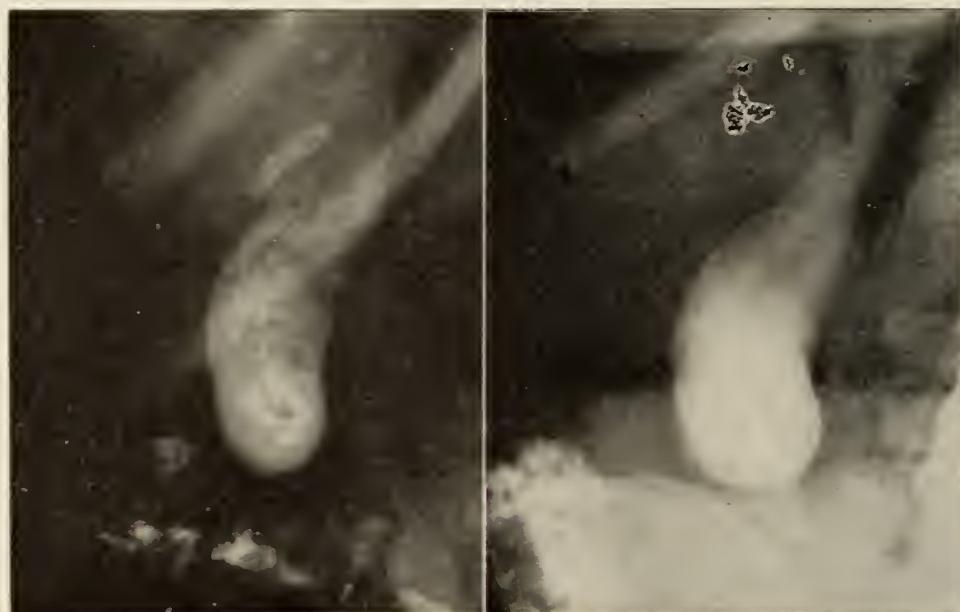


Fig. 6. Gallstones which disappeared. The first film was made in 1933, the second in 1938. (Case from Boston Dispensary.)

These opinions appear to be based on the management of late rather than early gallstone disease because none of these writers seems to have taken into serious consideration the fact that gallstones are often recognized almost by accident before they produce symptoms.

The most judicious therapy of "silent stones" may be different than in their later stages of symptomatic activity. There are two writers who hint at this phase of the problem. In the latest edition of Cecil's textbook²² mention is made that occasional cases like the ones described here have been observed in which multiple gallbladder stones have disappeared. Therefore, because of this possibility, the choice of medical or surgical treatment of gallstones depends chiefly on the patient's general condition as well as on his or her wishes in the matter. Usually cholecystectomy is indicated because of the many serious complications which may otherwise occur; however, a course of nonsurgical treatment beforehand is not improper.

Andrews,²³ who incidentally was a surgeon, is even more positive. In his opinion any operation for a "silent gallstone" is a scandal. He believes the end results of surgery in patients with biliary colic are admirable. On the other hand, in those who do not present the picture of biliary colic but rather of vague indigestion, and when the stones are picked up almost by chance, the end results of surgery are apt to be disappointing. A small number of such patients may be cured by operation but too many are unimproved. He believes that the gallbladder has a digestive function and deplores the unnecessary sacrifice of this organ.

Thus, the best treatment of asymptomatic gallstones appears to be debatable. Perhaps medical opinion is swinging toward this viewpoint more generally. Dr. Christian has sent me a preview of his section on the treatment of gallstones for the fourteenth edition of Osler's textbook which will appear this spring. He says, "The single attack requires operation only in the unusual case of steadily increasing severity and evidence of severe infection. There are many patients in whom the symptoms are slight; for these surgical treatment is not indicated. There is an increasing number in whom gallstones, discovered by incidental x-ray, have caused no symptoms; they do not need other than medical management.

"It seems justified to say that the gallbladder has a definite usefulness in man's body economy and should not be removed unless there are satisfactory reasons for the belief that it no longer

will function normally, and that not functioning normally it better be dispensed with. So with persistent, uncomfortable symptoms, general ill health, repeated attacks of colic or jaundice, evidence of infection or obstruction of the biliary passages, operation should be advised, to be carried out, if possible, in an interval between attacks. In fairly mild, recurring attacks decision for or against surgery is not easy; watchful waiting with medical management seems safe."

I lean to the views expressed by Andrews and Cecil because they seem to me sensible and in line with current experience. Moreover, I wonder whether the gallbladder is of no importance. The very ease with which gallstones can now be recognized by cholecystography may lead to errors in therapeutic judgment. The demonstration that gallstones exist does not prove they are harmful, and before recommending operation the doctor should be as certain as possible of the soundness of his advice. One feels apologetic in meeting a patient whose gallbladder has been removed without producing a cure and who is forced to undergo a second operation to relieve the essential difficulty, particularly when this might have been recognized before the first operation by proper analysis and study of the history and clinical findings.

CASE REPORT IX

A patient said that for several years she had been annoyed by occasional attacks of right-sided cramps which lasted for a few minutes. These attacks were not accompanied by nausea or vomiting and were not followed by jaundice. The attacks appeared to be increasing in frequency and were becoming severe enough to be a continued source of worry. The blood, urine and other laboratory tests were normal. Plain films of the genito-urinary tract were not remarkable. Cholecystograms revealed that the gallbladder contained many stones; when or how they had developed was uncertain. It was known that twenty-five years prior to this time the gallbladder was normal, since it had been examined at an exploratory laparotomy.

Cholecystectomy was performed. A few days later she began to have attacks of abdominal cramps like those of which she had complained previously. Retrograde pyelograms revealed the right kidney was hydronephrotic. Nephrectomy accomplished what cholecystectomy failed to do. It might have been better judgment had the kidney been attacked first and the gallbladder had been left alone for a longer time.

Periodic health examinations of apparently healthy persons give doctors an opportunity to observe the development of gallstones and to make an early diagnosis before they cause symptoms. A method is at hand by this means which makes it possible to study more accurately the life history of uncomplicated gallstone disease and to investigate satisfactory methods of non-surgical treatment.

At present the medical treatment of gallstones is unimpressive. About all there is to it are due warnings to call for help should any complications set in, regulation of weight, correction of constipation, properly controlled exercise, simple food, the use of cream or olive oil to empty the gallbladder periodically and the regular administration of bile salts in some form, combined with periodic visualization of the gallbladder to super-



Figure 7. Gallstones too easily recognized. The cause of the patient's abdominal pain was a hydronephrotic kidney.

vise what is happening in that peculiar organ. It is not harmful to follow patients with "silent gallstones" in this simple manner for a time before advising surgery, and it may be helpful. A certain number will recover and will be spared an operation with its inevitable risk and rather prolonged period of convalescence.

SUMMARY

Gallstone disease continues to exhibit certain peculiarities. Great strides have been made in the diagnosis and treatment of gallstones in the last twenty-five years, and their surgical management has been notably effective. Their med-

ical treatment has not kept pace with surgery. If we can learn to make gallstones disappear regularly, as now happens occasionally, we can begin to speak with some assurance concerning the medical treatment of gallstones. Perhaps the knowledge with which to do this will be forthcoming in the next twenty-five years.

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SYMPTOMS OF PULMONARY DISEASE*

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In the past few years physicians on the admission service of the State Sanatorium have been impressed with the number of individuals admitted to the institution without definite pulmonary tuberculosis requiring treatment. There are no vacant beds at the sanatorium. A diagnostic chest service has been contemplated, but as long as the bed capacity is taxed by patients with actual pulmonary tuberculosis requiring sanatorium care, such a plan must be deferred. Patients entering the sanatorium are retained in the admitting wing until the diagnosis of pulmonary tuberculosis is either established or excluded. A legal time limit of thirty days is given for this procedure. It is obvious that in many instances a month's observation is too brief for excluding the diagnosis of active pulmonary tuberculosis, and a few errors have been made because of this.

With full occupancy of the hospital, it has seemed that some of the burden for determining the presence or absence of tuberculosis should rest upon the general practitioner to whom the patient first appeals for medical advice. The opportunity of making the original diagnosis is his. To some patients, admission to an institution for tuberculous individuals, even for observation, is a stigma which they would avoid if at all possible. Yet the following table demonstrates the yearly admissions to the State Sanatorium and the number and percentage of those discharged as nontuberculous within a thirty day limit:

Year	Total Admissions	Nontuberculous	Per Cent Nontuberculous
1938	252	36	14.28
1939	300	47	15.66
1940	321	56	17.45

A brief comment on this trend is in order. During this same three-year period there has been a gradual reduction in the waiting list so that the time elapsed between application and admission has been substantially diminished. A longer interval would undoubtedly aid the referring physician in determining the nontuberculous etiology of the patient's complaints.

The material for this study consists of 105 consecutive admissions in an eighteen-month period among the regular admissions to the sanatorium. They were discharged, however, as presenting no evidence of pulmonary tuberculosis which required institutional care. An attempt is made to analyze the entrance complaints, the duration of symptoms, the diagnoses which were either established or assumed on the basis of history and results of examination. This group is then com-

pared with a similar number of proved tuberculous patients to determine the parallels and significant differences in the complaints.

AGE AND SEX DISTRIBUTION OF 105 NONTUBERCULOUS PATIENTS

Age	Male	Female	Total
11-20	5	8	13
21-30	21	13	34
31-40	14	10	24
41-50	19	3	22
51-60	2	4	6
61-70	5	..	5
71-80	1	..	1
	67	38	105

From these figures it is seen that the patients fall into the usual age groupings, with the largest number in the third decade. Even those in the sixth, seventh and eighth decades are not unusual for tuberculosis, as will be shown later.

For the purpose of this study, the discharge diagnoses have been divided into four major categories:

I. Healthy chest	43
II. Nontuberculous pulmonary disease—	
diagnosis established	
a. Lung abscess	14
b. Bronchiectasis	10
c. Carcinoma	7
d. Others	10
III. Extrapulmonary disease—	
diagnosis established	5
IV. Nontuberculous pulmonary disease—	
diagnosis tentative	16

The major pulmonary system symptoms investigated were cough, both productive and nonproductive; blood-streaked sputum or hemoptysis; chest pain, singly or in combination.

The tabulation of the symptoms with reference to the discharge diagnosis follows:

CORRELATION OF SYMPTOMS AND DIAGNOSES IN NONTUBERCULOUS PATIENTS

Symptoms	Group								Total
	I	IIa	IIb	IIc	IId	III	IV		
Asymptomatic	3	..	..	..	2	..	..	..	5
Nonproductive									
Cough	3	..	..	1	1	..	..	1	6
Productive Cough	9	3	3	2	2	1	4	24	
Bloody Sputum	3	..	1	..	..	..	..	1	5
Chest Pain	8	1	..	..	1	..	..	..	10
Cough and Hemoptysis	5	4	4	1	1	2	4	21	
Cough, Hemoptysis and Chest Pain	4	5	2	3	2	..	5	21	
Hemoptysis and Chest Pain	3	..	..	..	..	1	..	..	4
Cough and Chest Pain	4	1	..	..	1	1	1	1	8
Wheezing	1	..	..	..	..	..	..	..	1
Total	43	14	10	7	10	5	16		105

In the first group the diagnosis was made when careful physical examination revealed no abnormal signs, and stereoradiograms disclosed no striking deviation from normal. The age distribution of this group follows:

AGE DISTRIBUTION OF PATIENTS WITH HEALTHY CHESTS

Age	Number of Patients
15-20	10
21-30	15
31-40	10
41-50	5
51-60	1
61-70	1
71-80	1

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

Thirty-five, or 82 per cent, of these patients are between the ages of fifteen and forty years. Of the total, three were without symptoms and were sent in for possible pulmonary tuberculosis because of contact history. Cough, as a symptom occurring alone or in combination, productive or nonproductive, was present in twenty-two patients, or 51 per cent. Hemoptysis occurred singly or with other symptoms in twelve patients, or 28 per cent. Sixteen patients, or 37 per cent, complained of chest pains which varied from transitory discomfort and a sensation of constriction to a true pleuritic type. Thus the major symptoms of pulmonary disease were present in all but three patients; and from the standpoint of the history alone there was justification for considering a diagnosis of pulmonary tuberculosis.

Fourteen patients were discharged with a diagnosis of lung abscess. In practically all of these cases there was evidence on the basis of roentgenograms to confirm the clinical impression. Careful search of the sputum failed to discover tubercle bacilli. In this group, cough and hemoptysis, with or without chest pain, were the dominant symptoms.

Surprisingly few patients were discharged with the diagnosis of bronchiectasis. Ten, or 9.5 per cent, composed this series. Others were given a tentative diagnosis of bronchiectasis, but this was not proved by bronchography.

The group of patients with bronchial carcinoma is too small to permit any conclusions; but approximately half of them had a combination of cough, hemoptysis and chest pain.

Among the nontuberculous patients with manifest pulmonary disease were found such processes as spontaneous pneumothorax, old empyema, pleural effusion, bronchial asthma, pulmonary congestion associated with heart disease and slowly resolving pneumonia.

Those with extrapulmonary disease presented such varied diagnoses as intrathoracic goiter, subacute bacterial endocarditis and rheumatic heart disease.

Among the patients in whom definite diagnosis was not made, the following tentative impressions were held: focal tuberculin reaction, possible bronchiectasis, possible carcinoma, lung abscess, atypical bronchopneumonia, chronic pneumonitis of unknown etiology, rheumatic heart disease with pulmonary congestion and hydrothorax, rheumatic heart disease, and malignant lymphoma (indicated by lymph node biopsy).

In classifying a group of tuberculous patients admitted during the same interval we have adopted the criteria of the National Tuberculosis Association, grouping them according to the standard

divisions of minimal, moderately advanced and far advanced. Noteworthy are the number in the advanced age groups and also the preponderance of females.

AGE AND SEX DISTRIBUTION OF TUBERCULOUS PATIENTS

Age	Sex		Minimal		Moderately Advanced		Far Advanced	
	Male	Female	Male	Female	Male	Female	Male	Female
11-20	3	8	1	1	1	..	1	7
21-30	13	23	..	..	3	5	10	18
31-40	6	11	..	2	1	4	5	5
41-50	7	10	..	..	1	3	6	7
51-60	7	3	..	..	..	1	7	2
61-70	4	..	..	..	..	..	4	..
	40	55	1	3	6	13	33	89

This section was then studied according to symptoms as disclosed on their entrance complaints. The resulting tabulation follows:

CORRELATION OF SYMPTOMS IN TUBERCULOUS PATIENTS

	Minimal	Moderately Advanced	Far Advanced	Total
Cough	..	7	25	32
Nonproductive Cough	..	..	2	2
Hemoptysis	..	1	..	1
Chest Pain	2	3	1	6
Cough and Hemoptysis	1	..	18	19
Cough and Chest Pain	..	7	14	21
Cough, Hemoptysis and Chest Pain	..	1	12	13
Asymptomatic	i	..	..	1
Total	4	19	72	95

Let us compare the nontuberculous and the tuberculous patients on the basis of respiratory tract symptoms:

COMPARISON OF SYMPTOMS IN TUBERCULOUS AND NONTUBERCULOUS GROUPS

	Nontuberculous Number	Nontuberculous Per Cent	Tuberculous Number	Tuberculous Per Cent
Hemoptysis	5	4.6	1	1.0
Cough	30	28.5	34	36.0
Chest Pain	10	9.5	6	6.3
Hemoptysis and Cough	21	20.0	19	20.0
Hemoptysis and Chest Pain	4	3.8	..	..
Cough and Chest Pain	8	7.8	21	22.0
Hemoptysis, Cough and Chest Pain	21	20.0	13	13.8

The parallelism of these sets of figures is rather striking, applying at it does to tuberculous disease, nontuberculous respiratory tract disease, and healthy chests.

At this point it should be pertinent to investigate the sources of the symptoms of respiratory tract disease. The most obvious of these is cough. Its purpose is the expulsion of foreign material from the bronchial tree. The mechanism is simple. Cilia help to bring material from the distal portions centrally; the bronchioles themselves exhibit a peristaltic movement with a resultant centripetal current. When the material reaches the trachea, the act of cough is initiated, probably through the sensory nerves—the recurrent laryngeal for the area below the vocal cords and the superior laryngeal for the mucosa above the cords. The act of cough is an expiratory effort, with the glottis first closed in order to build up pressure, and

then quickly opened so that the rush of air carries with it the offending collection.

What can provoke cough? It can be foreign material aspirated into the tracheobronchial tree or secretions from the bronchial branches themselves. Certain other conditions through excitation of vagal efferents within the lungs, nerve endings in the pleura, or ear disease with stimulation of terminals of the auricular branch of the vagus may initiate the cough mechanism. There is nothing implicit in cough itself which should evoke a special diagnosis of pulmonary disease. It implicates, however, the entire respiratory tract from the accessory nasal sinuses on down.

Hemoptysis is the most dramatic of the episodes which direct attention to the lungs. It may vary from faint streaks or flecks of blood in the expectorated material to almost exsanguinating, repeated hemorrhages. Its source is variable and the significance depends largely upon that source. Blood may come from the gingiva, the tonsillar area or elsewhere in the nose and throat. Undoubtedly the safest course in studying such a patient is to assume that it comes from the lungs until that assumption can be disproved. Common causes of hemoptysis are bronchiectasis, carcinoma, pulmonary tuberculosis and mitral stenosis. Of these, mitral stenosis should be the most obvious. Carcinoma, on the other hand, requires the most immediate diagnosis.

Chest pain is one of the most insistent of symptoms, and it may vary from slight twinges to a discomfort so intense as to be incapacitating. Usually most of these states are called pleurisy. When the pain occurs, its relation to bodily activity, breathing and coughing, and its association with fever, should be noted. We have learned that true pleurisy, especially the so-called benign pleurisy with effusion, can have grave significance as an early manifestation of tuberculosis. It may also be present with cancer or cardiac disease.

These major symptoms may exist separately or in combination. In addition there may be certain other points directly referable to the lungs such as wheeze, hoarseness and dyspnea. Wheezing of long duration and related to asthmatic attacks may have no deeper significance. When it develops in the older age groups, and particularly when it is unilateral or even more sharply localized within one lung, it implies a non-generalized process based upon a narrowed bronchial lumen. The most common causes of such a symptom will be bronchogenic carcinoma, bronchial adenoma or tuberculosis endobronchitis. A unilateral or localized emphysema will be produced on the same basis and may have a very similar significance.

Hoarseness may result from intrinsic laryngeal lesions or interference with the nerve supply; but when it reflects persistent coughing, as in laryngitis simplex, it may point to pulmonary disease of long standing.

The subject of dyspnea cannot be dismissed with a brief statement. It refers to the patient's awareness of difficulty in breathing. It implies damage to the cardio-respiratory mechanism—damage which develops on the basis of intrinsic cardiac disease or the heart's response to pulmonary dysfunction.

We have tabulated additional symptoms discovered in the tuberculous patients:

GENERAL SYMPTOMS IN TUBERCULOUS PATIENTS

	Minimal	Number	Per Cent	Moderately Advanced	Far Advanced	Total
				Number	Per Cent	
Asymptomatic	1	3	16.0	3	4.0	7
Weight loss	1	8	42.0	46	64.0	55
Fatigue	3	13	68.0	57	79.0	73
Fever	1	5	26.0	24	33.0	30
Sweats	..	2	11.0	6	7.0	8
Hoarseness	1	5	26.0	15	22.0	21
Dyspnea	1	2	11.0	19	26.0	22
Wheezing	..	..	..	1	1.0	1

The leading constitutional symptoms are weight loss, fatigue and fever. Since these are obviously very general indices of disease, they cannot be related specifically to tuberculosis or the non-tuberculous pulmonary diseases. They must be assessed in the light of the total clinical picture.

SUMMARY

Study of two groups of patients recently admitted to the State Sanatorium has shown a striking constancy in symptoms: cough, hemoptysis, chest pain (singly or in combination) and hoarseness, dyspnea and wheezing. Associated constitutional symptoms are weight loss, fatigue, fever and sweats.

From this survey, we can conclude that no specific symptom or no small group of symptoms is pathognomonic of pulmonary tuberculosis to differentiate it from other diseases of the respiratory tract; however, when a patient presents these complaints, certain major disease processes must be kept in mind. Obviously, the investigation of the patient should begin with an inquiry into the history of the development of the illness, and any suggestive lead from this source should be pursued carefully. Physical examination may help to determine not only the location of the lesion but also the nature of the responsible process. We cannot rest until a satisfactory explanation for the symptoms is forthcoming, and the process used should be one of exclusion. For this purpose, further investigation may employ one of the simplest aids we possess; the tuberculin test. With its high degree of sensitivity, if negative, it will in

most instances be adequate to rule out tuberculosis, since in the ambulatory patient active pulmonary tuberculosis is almost uniformly associated with a positive tuberculin reaction. If the tuberculin test is positive, our search must go on. The next step should be a good chest roentgenogram which will help to indicate whether or not a pulmonary parenchymal process is present. It should be emphasized here that a poor roentgenogram is not only worthless but may indeed be misleading, since actual lesions—as of minimal tuberculosis—may be present but not visualized simply through improper technic. If a parenchymal lesion is discovered, the determination of its pathogenesis is the next step. Intensive sputum studies will show tubercle bacilli if these are responsible, or significant pathogenic fungi may be revealed. Lung abscess, in its more acute phases, need not be difficult, but the chronic abscess may elude diagnosis for a long time, masquerading as chronic pulmonary tuberculosis without positive sputum. Additional steps are investigation of the tracheo-bronchial tree by instillation of contrast medium into the bronchi and the direct visualization by means of the bronchoscope. These devices have become increasingly important in investigation of bronchial carcinoma. They should be employed as early as possible if the diagnosis cannot be made without them, because in carcinoma early diagnosis is extremely urgent if therapy is to be effective.

Patients do not seek the specialist when their complaints center about the respiratory tract. They consult their family physician. He has known their background, their associations and their occupations. He can be alert to the diagnosis of early tuberculosis when the patient has been exposed to others with manifest disease. He can suspect bronchiectasis, tumor and carcinoma long before anyone else; and by utilizing certain standardized, routine procedures he may arrive at the diagnosis at a time when remedy of the process will be simplest and most effective. In his hands, then, rests the welfare of this large group of patients.

Discussion

Dr. Jesse C. Painter, Dubuque: I wish to thank Dr. Galinsky for the privilege of listening to a very interesting and instructive paper. This paper confirms the opinion which has been prevalent—either expressed or unexpressed—in the minds of many physicians. This opinion is that the correct diagnosis of chronic pulmonary disease, and particularly the diagnosis of pulmonary tuberculosis, is not such an easy and simple process as it was once thought to be.

Dr. Galinsky has just told us, and I quote: "It is obvious that in many instances a month's observation is too brief a time for excluding the diagnosis

of active pulmonary tuberculosis." He also told us that in this series of 105 patients discharged as nontuberculous, sixteen were discharged with "Diagnosis tentative." In other words, after thirty days of observation in the sanatorium, under the best of hospital conditions and with every laboratory, x-ray, and special consultation facility available, 6.5 per cent were discharged with no definite positive diagnosis as to the disease present. In 38 per cent of those who were diagnosed as having lung abscesses, bronchiectasis and carcinoma, there was usually an apparent need for rather long periods of observation and the use of special diagnostic apparatus and technic in the hands of physicians especially trained in such diseases.

Another conclusion by Dr. Galinsky with which we most heartily agree is that "No specific symptom or no small group of symptoms is pathognomonic of pulmonary tuberculosis to differentiate it from other diseases of the respiratory tract." There are many cases in which all of the various diagnostic procedures are necessary before a positive diagnosis can be made.

From observation of this series of cases, one can readily see the difficulties experienced by many family physicians where laboratory, x-ray and hospital facilities are not available for a period of observation. This is probably especially true where such service is not available for indigent or semi-indigent patients.

It was with a realization of and consideration for the difficulties of the general practitioner in making a differential diagnosis in pulmonary tuberculosis, and with a realization that there is a change being made in the method of approach in the diagnosis and management of many diseases, and especially of tuberculosis, that the Committee on Tuberculosis of the Iowa State Medical Society, has made an effort to assist in a satisfactory solution of this problem. An effort was made by this committee to encourage and stimulate the county societies in their efforts to keep the general practitioner informed of the latest methods of diagnosis and treatment of tuberculosis. Each society was encouraged to have at least one paper or program on tuberculosis during the year. This committee feels that a beginning has been made in helping to solve the difficulties of the general practitioner in his problem of differential diagnosis in pulmonary disease. This will also help solve the problem of the sanatorium presented in this paper.

Dr. John Russell, Des Moines: The diagnosis of pulmonary disease is no longer the haphazard procedure it was twenty years ago. In the past two decades marked advances have been made in diagnosis as well as in treatment of diseases of the lungs.

Twenty years ago history, symptoms, physical findings and very often intuition were relied upon almost exclusively in making a diagnosis in cases where pulmonary disease was suspected. While all of these sources of information have certain values even today, they are usually insufficient for a positive diagnosis and must be supplemented by more

exact and specific methods of examination before a comprehensive diagnosis can be made.

The x-ray film is the most valuable aid we have in revealing the important chest conditions such as tuberculosis, cancer, abscess, tumor, atelectasis, spontaneous pneumothorax, pleural fluid, foreign bodies, rib fractures and other more obscure conditions. X-ray examination is now available to all patients except those who are critically ill and cannot be safely transported. There is little excuse in this day and age of excellent transportation facilities, well equipped hospitals, clinical and x-ray laboratories, for neglecting to obtain adequate x-ray studies and other laboratory examinations in patients suspected or known to have pulmonary disease. Differential diagnosis in diseases of the respiratory tract is frequently made entirely upon laboratory findings, and such aid should be used more extensively by the general practitioner. Thorough sputum examination is extremely important in the diagnosis and classification of pulmonary tuberculosis.

The diagnosis of early tuberculosis is made possible by means of the x-ray film. That is the only means by which the early tuberculosis lesion can be found. The importance of early diagnosis in pulmonary tuberculosis can be fully appreciated only by those of us who treat the disease in the sanatorium. Early diagnosis means the difference between curable and incurable tuberculosis. Suggestive symptoms are frequently absent in early tuberculosis and if symptoms are present they are unreliable as a basis for determining a diagnosis, as has been so conclusively shown by Dr. Galinsky.

No physician should depend upon physical examination alone in making a diagnosis of pulmonary tuberculosis. I wish to emphasize that point again. The temptation to use the stethoscope is strong and must be resisted. Forget that you have a stethoscope. Its use will likely lead you astray if you find something abnormal and will give you a false sense of security if you find nothing.

It seldom should be necessary for a general practitioner to refer a patient to a chest specialist for a diagnosis of pulmonary tuberculosis. If the general practitioner, who usually has the first contact with the patient, will keep the subject of tuberculosis in mind, will look for tuberculosis and will send his suspects to the x-ray and clinical laboratories for such investigation as may be indicated, more cases of tuberculosis will be found in the stage when it can be successfully treated. By this means, too, fewer cases of inactive tuberculosis and nontuberculous disease will be sent to the State Sanatorium for Dr. Galinsky and his associates to worry about. However, in doubtful or obscure cases, admission to the State Sanatorium is undoubtedly justified as a means of determining the correct diagnosis and need for treatment.

Tuberculosis is progressively retreating in Iowa. Our mortality is one of the lowest in the United States. Let us continue the attack relentlessly until we find all the active sources of infection. Then its eradication will become possible.

UNILATERAL EXOPHTHALMOS CAUSED BY ARTERIOVENOUS ANEURYSM*

JOHN C. CUNNINGHAM, M.D., Dubuque

Pulsating exophthalmos is a rarity; one case in every 22,500 clinical patients is the usual occurrence. Eighty-five per cent of the cases of pulsating exophthalmos are due to arteriovenous communication between the internal carotid artery and the cavernous sinus or to an aneurysm of the internal carotid artery within the cavernous sinus. The etiology of the arteriovenous communication may be either traumatic or nontraumatic. Locke,¹ in studying the etiologic factors in 544 cases, found that 78.84 per cent were traumatic and 23.16 per cent were spontaneous in origin. It is well to remember that the cavernous sinus is the only venous channel traversed by an artery and the only place in the cranial cavity where a large artery and vein are contiguous, thus explaining anatomically why this is the most common site for the lesion intracranially.

No attempt is made to review the literature on the subject. This has been ably done recently by Sugar and Meyer.² This case is presented due to the interesting clinical and postmortem findings.

CASE REPORT

E. S., a woman 60 years of age, was first seen on August 18, 1941. She gave a history of migraine headaches for three or four years, and the rest of her past history was irrelevant except for a severe fall which she had experienced eight months before. At that time she had slipped on an icy walk and struck the right frontal and temple area of her head. There was marked swelling and ecchymosis of this area, which persisted for some time. She did not become unconscious as a result of this fall and recovered without any persisting symptoms. However, she had noted that she had fallen on one or two other occasions since the injury for no apparent reason. She continued with her work.

The present illness dated from August 11, 1941, at which time, while doing her work about the house, she experienced a sudden, severe, stabbing pain behind the right eye, which lasted for about a minute. The pain was so severe that she felt weak, perspired freely and felt nauseated. The severe pain was followed by a dull headache, localized on the right side, plus a swishing sound in the head, synchronous with her heart beat. The next day the right lids became swollen, the headache persisted and she experienced double

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

vision. The swelling of the lids and double vision increased in severity. The bruit bothered her a great deal and prevented sleeping.

Examination eight days after the onset of the sudden retro-orbital pain showed marked edema of the upper and lower right lids, right exophthalmos of five millimeters, a complete paralysis of the right third, fourth and sixth oculomotor nerves and complete ptosis of the right upper lid. Outline of the veins of the upper lid could be felt. A definite bruit could be heard over the right orbital area with a stethoscope. Vision of the right eye uncorrected was 20/70, corrected to 20/40; vision of the left eye was 20/40, corrected to 20/20. The right pupil was moderately dilated and reacted sluggishly to light. Marked chemosis of the conjunctiva was present as well as slight haziness of the cornea due to edema. There was marked pulsation of the retinal veins, and the small area of retinal edema above the disc and the disc itself showed slight papilledema. The tension of the right eye was 30 with a Schiötz's tonometer. Examination of the left eye showed no loss of motility, the media was clear and the tension was 16. The disc showed no evidence of edema. The retinal arteries were sclerosed, Grade II, and narrowed.

The general physical examination was essentially negative other than a slightly enlarged heart. The blood pressure was 180/90. The pulse was regular and of good quality. There were no neurologic signs other than those of the eye. The patient was somewhat drowsy, but she had previously been receiving sedatives, so the true value of drowsiness was difficult to determine. X-ray examination of the skull showed slight thinning of the sella turcica on the right side. Examination of the blood revealed a normal count and a negative Wassermann reaction. The bruit over the right orbit could be lessened subjectively and objectively by digital pressure over the right common carotid artery.

A diagnosis of communication between the right internal carotid artery and right cavernous sinus was made. The treatment, as planned, was to give the patient complete bed rest and sedation plus increasing digital pressure over the right common carotid artery for a period of two weeks, and if the digital pressure was well tolerated it was to be followed by a partial closure of the right common carotid artery, and later a complete closure of the same vessel was to be done.

This plan was initiated. For the first two days after starting digital pressure of two minutes every three hours over the right common carotid artery, the patient felt better and noted a decrease

in the bruit. On the fourth day, after four minutes of digital pressure, the patient suddenly became semiconscious, respirations increased and a definite left partial hemiplegia developed. There also was a moderate degree of cyanosis and the pulse became weak and rapid. This attack occurred one-half hour after the last digital pressure. Further digital pressure was stopped. Within twelve hours the patient became conscious and was able to move the left arm and leg. There was some left, residual facial weakness. The patient felt the bruit was much less, although objectively the bruit was as marked as before. For the next two days she complained of numbness and tingling of the left arm and lower extremity. The blood pressure and pulse did not vary except at the onset of this sudden semicomatose condition. When brief digital pressure was attempted over the right common carotid artery, the patient complained of increased tingling and numbness of the left side. It was difficult to say at this time whether the increasing digital pressure or hemorrhage into the brain substance had brought on the sudden change. The right cornea had become more hazy. Tension remained elevated despite pilocarpine and eserine therapy. The right pupil remained moderately dilated and reacted very slightly to light. The conjunctiva had become more chemotic. The right fundus showed increased edema of the retina above the disc.

The patient continued to feel slightly better for three days following her attack of semiconsciousness and left temporary hemiplegia. She was transferred to the University Hospital at Iowa City. On the fourth day after the first attack of hemiplegia, she again became semicomatose. The right common carotid artery was ligated under local anesthesia by Dr. J. W. Dulin. She was improved immediately following the operation, but in twelve hours she developed hemiplegia and died.

A summary of the postmortem examination, as reported by Dr. W. W. Wollmann of the Department of Pathology, is as follows:

"There is some subarachnoid hemorrhage over the base of the brain, especially on the right side. The right cerebral hemisphere, on palpation, especially in the frontal and parietal regions, is much softer than the left. On further examination, it is found that there is only a thin shell of white and grey matter and that the entire central portion of the right cerebral hemisphere, especially the frontal and parietal regions, is composed of hemorrhagic, softened cystic brain tissue. There is a vascular aneurysm of the right internal carotid artery in its cavernous portion. In the cavernous

portion of this artery, three centimeters from its distal termination, there is a stoma five millimeters in diameter which connects with a sacular aneurysm of the artery. This aneurysm is found in the lateral portion of the cavernous sinus between the body of the sphenoid and the dura. The aneurysm measures 16 by 8 by 8 millimeters. It can hold three to four centimeters of fluid. There were small punctate openings between the aneurysm and the cavernous sinus. The aneurysm is close to and compresses the third, fourth and sixth and the maxillary and mandibular divisions of the fifth cranial nerves. Sections of the brain after fixation show much swelling and softening in the anterior and middle portions of the right cerebral hemisphere. The right external capsule is the site of an old thrombotic process. Section of the aneurysm shows a thrombus adherent to the intima." The cerebral hemorrhage occurred, in Dr. Wollmann's opinion, "Because of inadequate blood supply to the area (the right cerebrum) due to the arteriovenous aneurysm, cerebral ischemia and thrombosis of the smaller vessels developed distally. As the process went on, some of the vessels ruptured into the ischemic zone as a result of back pressure and vessel degeneration. The subarachnoid hemorrhage was due to rupturing of the hemorrhagic softening area into the ventricles."

Personal communication from Dr. A. L. Sahs of the Department of Neurology at the University Hospital, who agrees with Dr. Wollmann as to the course of events in this case, states: "Softening of the right cerebrum distal to the aneurysm is explained on the basis of shunting of blood through another channel, thus producing an ischemia distal to the aneurysm or to clots which form in the aneurysmal sac. Bits of clot are whipped into the vessel and act as emboli, producing encephalomalacia. As time goes on, bleeding occurs in the degenerated areas of the brain."

COMMENT

A case of communication between an aneurysm of the internal carotid artery and the cavernous sinus, which produced unilateral pulsating exophthalmos six months after definite trauma, has been presented. The sudden, severe retro-orbital pain with diplopia, plus the bruit, were the chief subjective symptoms. The glaucoma, the complete external ophthalmoplegia, the dilated pupil, the edema of the retina above the disc with the slight papilledema, the conjunctival chemosis and the orbital bruit were the salient clinical features. The unusual feature of the case, in view of the postmortem findings, was the attack of semicon-

siousness with temporary hemiplegia following digital pressure over the common carotid artery. In effect this resembled ischemia due to the pressure, but actually was due to the process of degeneration going on in the cerebrum as a result of emboli and ischemia associated with the aneurysm. It is important to remember in these cases that cerebral ischemia and degeneration, with accompanying hemiplegia, may be developing before digital pressure or carotid closure, is tried.

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FACTORS IN LOWERING MORTALITY OF PERFORATIVE APPENDICITIS*

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There is probably no subject in the entire field of surgery which has received more attention in surgical literature or has been more widely discussed at medical meetings during the past half century than that of appendicitis and its complications. Yet year after year anyone who follows the vital statistics of the Bureau of Census is struck with the fact that the mortality of appendicitis has been held at a standstill only occasionally, and in most years it actually has been on the increase, regardless of the unusual clarity of the pathology and treatment of this disease. It is now estimated that from 20,000 to 25,000 people die annually of this disease in the United States. Although reports of this type may be misleading, they nevertheless serve a most useful purpose in emphasizing the importance of the continuance of our efforts to reduce this excessive mortality. The responsibility of reducing this mortality of a disease which can be readily cured before the onset of advanced complications and sequelae lies entirely with us, the medical profession. The instruction of the laity concerning the importance of the possible seriousness of abdominal pain which persists for more than a few hours, and the warning against the indiscriminate use of laxatives in the presence of abdominal pain, has unquestionably been of great value in lessening the mortality rate of appendicitis. I feel, however, that too little time and space has been given to constructive criticism of the work of the physician himself. Because the risk of appendectomy is practically negligible before rupture has occurred, I shall confine

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my remarks to factors which might lower the mortality rate in perforative appendicitis.

At the head of the list of these factors stands the delay of operation. The frequently repeated saying, "Get in quick and get out quicker," was a catch phrase attributed to Dr. J. B. Murphy. It was constantly being misunderstood and, therefore, was subjected to much criticism. He was merely trying to make the profession realize the importance of prompt diagnosis and the institution of surgical treatment before the inflammatory process extended to the surrounding peritoneum. Dr. John B. Deaver was credited with spending a part of every work day denouncing delay in the diagnosis and treatment of appendicitis as a pertinent factor in the high mortality of the disease. Acute appendicitis may inflict greater damage and danger in ten hours in one individual than it will in thirty to forty-eight hours in another. I have seen in the past more than just a few gangrenous appendices which have perforated within six to twelve hours after the initial onset of known symptoms. These, however, are exceptional, and one should be able to assume that if every patient with acute appendicitis could be operated on in the first twelve hours of his attack, deaths could be practically abolished. In other words, of the 25,000 or more persons who die annually of appendicitis, 20,000 or more could be saved if they were operated on early. It is appalling when we face the fact that in about 20 per cent of all the cases of acute appendicitis the appendix has ruptured before the patient is seen by the surgeon. Preventive surgery is as important as preventive medicine, and preventive surgery is surgical intervention before a critical state has developed in conditions which indicate this method of treatment.

Ninety-nine per cent of the deaths which occur from appendicitis may be attributed to the fact that someone has erred. It may be that the patient himself has carried out home remedies such as taking a laxative instead of calling his physician, thus causing a delay until fatal consequences have arisen, or he may be one of few persons who refuse to permit surgical intervention. It may be failure on the part of the physician himself to recognize the condition and recommend operation. There are still too many physicians who insist on some or all of the cardinal symptoms of acute appendicitis, such as fever, increased pulse rate, increased leukocytosis and localized pain and tenderness. Acute obstructive appendicitis does not often present cardinal symptoms, and it is this type which is most likely to perforate and in which over 90 per cent of the deaths occur. In appen-

dicular obstruction the most characteristic symptom is a colicky type of pain which has a sudden onset and is intermittent. The temperature and leukocyte count are usually normal in the early stage and vomiting is seldom present. It is in these cases of acute obstructive appendicitis that the interval between onset of symptoms and the perforation is often very brief and the peritoneal cavity and omentum are not prepared to form a good barrier to combat the infection. I have been impressed with the high incidence of the presence of a fecalith either at the site of perforation or free in the abscess cavity in cases of perforative appendicitis. The conclusion must be that the fecalith is directly responsible for the greater virulence of an attack and has a tendency to produce earlier and greater pathologic changes.

Unfortunately, there are still a few physicians who, when called at night regarding a patient suffering with an attack of abdominal pain, will prescribe for its relief by telephone or send a sedative and state that they will see the patient in the morning. Others may order a purge or procrastinate in the diagnosis until they see the condition has progressed well beyond their ability to stop its course and then call in a surgeon to perform the miracle of saving the life by operation. I have frequently experienced this. I always knew what to expect when some physicians called stating they had a patient with acute appendicitis upon whom they wished me to operate; namely, a ruptured appendix. They always watched their patients three to five days and the only ones about whom they called were those in whom the pathologic changes did not subside on their "conservative" or "expectant" treatment. One physician was always stating to his clients and often at medical gatherings that the only patient with appendicitis whom he had ever lost was one in whom the appendix had ruptured and upon whom a surgeon had operated. With good fortune I brought his own elderly brother through an attack of perforative appendicitis, followed by pneumonia, in which he had allowed the appendix to rupture by watching for four or five days until peritonitis had set in.

There are many factors of importance in the preoperative, operative and postoperative care of perforative appendicitis, some of which should be emphasized for their possibilities in lowering mortality. First, the competency of the operating physician himself. I cannot help but feel that a very rational explanation for a part of the high mortality is that more and more men are operating now who have limited experience. It seems that the number of practicing physicians with

little surgical experience and even less surgical judgment is steadily and rapidly increasing. The seriousness of the complications of an advanced case of appendicitis is not only underestimated by the laity but also by these physicians, and as long as this seriousness is not recognized many of these patients will be operated upon by inadequately trained men. There are fifteen to twenty surgeons today for every one twenty years ago. The mortality rate of appendicitis in the United States is twice that in Switzerland, three times that in Germany, six times that in Italy, and over two times that in England and Wales. The important fact is that in these countries operating is permitted by only those with adequate surgical training. The laity and the medical profession are accustomed to considering the operation for goiter, gallstones, and stomach and bowel disorders as one of some magnitude and hazardous risk, and yet throughout the country the statistics show considerably less mortality for these operations than for appendectomies. The answer is undoubtedly in the large percentage of men who do appendectomies but not the other groups of surgery. The casual operator dangerously breaks up fresh adhesions. He is not impressed with the fact that simple drainage of a fresh abscess is better surgery than a "shell out" forcibly of a gangrenous, perforated appendix. There is no place in surgery where the art of gentleness should be more ardently carried out than in the removal of a deep-seated, gangrenous, perforated appendix. The incision for a diagnosed or suspected perforated appendix should be adequate. It permits easier and quicker work and allows for the better placement of a coffer dam about the right lower quadrant to wall off the spread of infected material while removing the appendix. If the appendix can be gently removed, it should be done; if not, drainage only should be instituted after carefully removing the loose infected material surrounding the appendiceal site. I consider the careful use of the coffer dam, which is removed before closure, and gentleness of removing the appendix two of the greatest life-saving factors in perforative appendicitis. A secondary operation to remove an appendix which it was thought best to leave at the primary operation cannot be compared to that of a death due to the fact that the appendix was removed along with the statement, "Gee, that was a tough one to get, but we got her out."

Recently the old controversy has risen again between the treatment of appendicitis with general peritonitis by the Murphy method and the Ochsner method. This comes up frequently and again

many good articles with favorable and impressive results are being published regarding the latter so-called conservative treatment. I feel I must still stand along with the former, however, except possibly in those patients who are seen so late they are moribund. Even some of these are saved occasionally by quick stab-wound drainage and an enterostomy. Murphy deplored what he called epidemics of so-called conservatism in treating appendicitis. Looking back over the records of the past thirty years, every time this method of treatment has been discussed in the medical journals it has even very noticeably followed in the statistics by a wave of increased mortality.

Of considerable importance is the question of drainage. Personally, I believe drainage should be instituted in every patient in whom pus is found, even if there are only a few drops. It is true much has been written about the closure of these openings without drainage, but most of it seems to be based on laboratory experiments on animals showing the difficulty of draining the general peritoneal cavity in diffuse peritonitis. Animals and humans do not react alike, and we must not let years of clinical experience be outweighed by laboratory experimentation. Drainage should be adequate, properly placed, and soft in order not to irritate adjacent tissues; then what harm can it cause? The provision of a drainage tract need never do harm, but to do without it might well be the cause of a fatality.

About two years ago Dr. Alexander E. Brown of the Mayo Clinic informed me that since they had started the practice eighteen months before of using five grams or more of sulfanilamide powder in the wounds of their patients with ruptured appendicities they had not had a single fatality, whereas formerly their yearly mortality had been 12 to 15 per cent in these cases. I immediately put this into practice and to date have also had the good fortune of not having a single mortality among patients operated on for perforated appendices during this period. It is foolish, of course, to talk of appendicitis without mortality, but this encouraging improvement in results has developed in spite of the fact that appendices were removed which formerly would not have been attempted, but which would have been only drained. I formerly used polyvalent anaerobic serum on these cases with favorable results on the theory that the presence of the anaerobic organisms created a more favorable environment for the growth of the more virulent aerobic organisms, such as streptococci and bacillus coli communis. I have continued to use it in conjunction with the sulfona-

mide therapy. It might be well to state that the sulfanilamide is given in solution by hypodermoclysis and by mouth when tolerated during the course of convalescence.

Another important factor in lowering the mortality rate is the choice of anesthetic. I prefer spinal anesthesia or some form of local anesthesia for the following reasons: relaxation is much better, thereby making the operation easier and lessening the amount of trauma; retching is absent or reduced to a minimum and is not comparable with that of any type of general anesthesia.

Many observers have remarked that practically all patients with perforative appendicitis who developed spontaneous fecal fistulae have recovered. In former years perforative appendicitis necessitated a decompression of the bowel by either ileostomy or cecostomy, which often proved a life-saving measure. It relieved the distention which resulted in the paralysis of the intestinal walls. This ileus was previously the most formidable danger in appendicitis. The laboratory technician will say it cannot be done, but clinically we know the Wangensteen suction or the Miller-Abbott tube does a nonsurgical decompression very well and without doubt is an important factor in lowering our mortality rate in paralytic ileus from any cause.

Other preoperative, operative and postoperative factors are well established or varied by individual thought and need not be reiterated in this paper.

I should like to close with a few remarks made by Dr. J. B. Murphy shortly before his death, "The mortality in appendicitis is still too great . . . It is far beyond that which timely and efficient surgical treatment affords. The present laxity in treatment appears to be due in fact that the subject is not receiving the forceful attention in the literature that it did ten to fifteen years ago. This accentuates our belief that every topic in surgery should be rewritten by masters every five to seven years to prevent decadence in practice." And "Let us return to our ideal, early operation is the only safe practice; we should not compromise with crime by procrastination."

Discussion

Dr. Carl H. Mathey, Davenport: I was interested in this paper by Dr. Eggleston and enjoyed it very much. I will admit that I was not acquainted with the fact that from 20,000 to 25,000 persons are estimated to die annually from appendicitis; and while I did feel that the mortality rate in appendicitis was an important question, I frankly underestimated it.

I am in accord with Dr. Eggleston when he turns the spotlight on the physician himself, because from my own contacts I know that most persons are now

appendix-conscious and the majority have an intelligent attitude. He has, however, inadvertently omitted one great source, which is particularly true in the state of Iowa, and that is the many different forms of the art of healing, many of which are of questionable nature.

We all know that the physician's position is often difficult. The diagnosis is not always easy and those most conscientious are also most likely to withhold surgical intervention until a definite diagnosis is made. I feel that when a diagnosis of appendicitis is made, however, an operation should be recommended and performed as soon as possible. On the other hand, operating for pain only cannot be recommended. It is most unfortunate for the patient and severely reflects on the profession if appendectomies are performed when the real condition causing the pain is neurosis, allergy, stone in the ureter, acute salpingitis or pneumonia.

The remarks concerning the caliber of some surgery performed need no comment; the statistics are too painfully true. Judgment and skill in surgery, as in everything else, increase with training and experience. An unfortunate situation arises when the operator does not realize he has erred and the mistake is repeated.

I cannot enter into the controversy regarding the so-called conservative treatment since I have not had any experience with it. The men in St. Louis and Baltimore with whom I had the pleasure to work were not so inclined and I have not attempted it in my own practice. In the same vein, their attitude and mine has been to institute drainage in questionable cases when possibly one could have done without, rather than to wish later that it had been done.

It is true that preventive medicine is the most important medicine and Dr. Eggleston has rightfully emphasized this phase. However, as he pointed out, we shall always at times be confronted with the care of patients afflicted with peritonitis. This is always a serious condition, and although we now have at our disposal much improved armament in the sulfonamides, Wangensteen tubes, and oxygen, it still calls for action at once. The case should be attacked with determination, attempting when possible to anticipate the natural complications and meet them before the damage is done, even to the extent of administering vitamins hypodermically if necessary.

Dr. Eggleston has said the most formidable danger is ileus, and I find it important to impress the nurse in charge with this fact in order that she will constantly make every effort to control this situation. The chief of service some years ago wagged his finger under my nose and said emphatically, "Never let ileus get ahead of you, since very likely you will never catch up." I have found those words very prophetic. The Wangensteen tube has done wonders, but I have found that oxygen administered by mask, where a very high per cent can be attained and given almost continuously, has accomplished even more.

PRACTICAL APPLICATIONS OF PRENATAL AND POSTNATAL CARE*

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The statement has been made repeatedly that virtually all obstetric accidents and emergencies are preventable. Prevention of any affliction is always more desirable and infinitely safer than any possible treatment after its occurrence.

Since the days of antiquity the woman with child has been regarded as a person who deserved signal consideration and required special care. The earliest medical writings contain instructions for the proper conduct of women during pregnancy, particularly as to their food, their activity, and the type of ointment which should be used in massaging the abdomen to prevent striae. It was not until the middle of the nineteenth century, however, that the first prenatal clinic was established more or less by accident.

In 1858 the Dublin Maternity Hospital had been so crowded that applicants for maternity care were obliged to present themselves for registration several months before their expected delivery. A brief record and physical examination were made by one of the hospital physicians who signed their cards. Any applicant with edema, headache, dizziness or albuminuria was treated actively and instructed to return to the clinic periodically until her confinement. It was soon noted that the incidence of eclampsia dropped sharply and that practically the only patients suffering from this condition were women admitted as emergencies.

Plass¹ states that the objectives of prenatal care are to provide "complete supervision of the pregnant woman in order to preserve the life, health and happiness of the mother and child" and "to enable her to withstand the unavoidable strain associated with labor and delivery."

In the past thirty years much has been written of prenatal care. Many refinements have been introduced, such as special laboratory and x-ray procedures and technics. Many of these procedures are expensive, and to the physician in rural and small urban communities whose patients come mostly from the low income group the cost makes their routine use prohibitive. Fortunately, however, good intelligent prenatal care may be given to any patient with the equipment found in any modern physician's office.

When the expectant mother first presents herself to her physician, a careful medical history should be elicited. Special attention should be paid to any previous infections which might have

caused kidney damage. A parous patient should be questioned concerning her previous pregnancies and labors.

Following the history the patient should be disrobed and a careful physical examination carried out. Special attention should be devoted to the heart and any possible foci of infection. The pelvis should be thoroughly examined and care taken in noting the size and position of the uterus. Many uteri in early pregnancy are retroverted. However, the majority of these correct themselves spontaneously at three and one-half to four months, and most authorities advise leaving them alone unless symptoms of incarceration become evident, in which event gentle replacement under general anesthesia should be done. The internal examination should be completed by palpation of the adnexa and inspection of the cervix. As a general rule, cervical lesions should not be treated during pregnancy.

In the past ten years much has been written concerning pelvic mensuration. Several technics have been perfected whereby a pelvis can be measured accurately by x-ray. Some physicians have advocated routine x-ray pelvimetry of every primigravida. This seems to be a rather radical viewpoint for the majority of practitioners whose patients come from the lower income groups. Much valuable information can be obtained by simple pelvic mensuration; all that is necessary is a caliper type pelvimeter. With the patient in reclining position, the interspinal and intercristal measurements are obtained. With the patient on her left side, the right leg straight and the left flexed, the external conjugate is measured. This is the most significant of the external inlet measurements and should be taken carefully with one point of the pelvimeter placed at the inferior margin of the symphysis pubis and the other at the sacro-lumbar junction. The patient is next placed in lithotomy position and the transverse diameter of the outlet, or the distance between the tuberosities of the ischia, is determined. There are various instruments available for this, but for practical purposes if the closed fist will fit between the tuberosities the outlet is eight centimeters or more and is within normal limits. When the transverse diameter is eight centimeters or less the posterior sagittal, the distance between the tip of the sacrum and the midpoint of a line drawn between the tuberosities of the ischia, should be measured. Last, but not least, with the patient still in lithotomy position the diagonal conjugate should be determined. This should be an integral part of the pelvic examination. With the patient's hips near the edge of the table and the elbow of the examiner resting on

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the knee, the index and second fingers are inserted into the vagina and pointed toward the promontory of the sacrum. Gentle but firm pressure is then exerted and an attempt is made to touch the promontory. If this is successful, the point just beneath the inferior margin of symphysis is marked, the fingers withdrawn, and the distance measured directly with a pelvimeter. If this is 11.5 centimeters or greater, the pelvic inlet will in all likelihood admit a baby's head of average size.

After the pelvic measurements have been determined, their interpretation is doubly important. All standard obstetric textbooks give the average normal minimum pelvic measurements. An all too frequent error is to assume that a pelvis having one or more measurements at or slightly below the minimum is an absolute indication for cesarean section. In evaluating a given set of pelvic measurements, one must always keep in mind that external measurements are at the best only a rough index of the size of the pelvic cavity. It matters little that the external conjugate measures 16.0 centimeters if the diagonal conjugate is greater than 11.5 centimeters. In cases of doubt one is much wiser to reserve final judgment until the patient nears the time of delivery. Many times the head engages deeply before the onset of labor, removing all doubt about the capacity of the pelvic inlet. In cases of borderline outlet contraction one must make a decision before the onset of labor, since this type of contraction does not produce arrest until late in the second stage when abdominal delivery becomes a hazardous procedure for the mother. No hard and fast rules can be laid down, but in general one can safely assume that an outlet measurement of seven centimeters or over will seldom produce serious dystocia. In cases of borderline pelvic contraction, x-ray determination of the diameters of the pelvis and the fetal head is extremely valuable. This must be done, however, by one of the approved technics, since a simple x-ray plate distorts the size of the fetal head and does not give an accurate comparison between the fetal head and the pelvic inlet.

At the first prenatal examination, or as early as possible thereafter, a routine blood and urine examination should be carried out. An early Wassermann test is, of course, fundamental. There is a marked tendency to develop secondary anemia in pregnancy.² The fetus acts as a parasite and the iron stored in the liver may not be adequate. If there is any evidence of anemia as disclosed by blood studies, iron by mouth is indicated. The trend at present is to give ferrous sulfate, usually five grains, three times daily with or after meals. This is inexpensive and is well tolerated by most patients.

Many patients suffer a mild form of subclinical hypothyroidism during pregnancy. Thyroid extract in small doses will often relieve the unpleasant symptoms of undue fatigue and lassitude frequently seen. In patients who are threatening to abort or who give a history of previous abortion, the rôle of thyroid extract is well established.

After completing the examination, a few moments should be taken for a frank discussion with the patient of the various aspects of pregnancy. It should be stressed that pregnancy is a perfectly natural condition and in no sense should be regarded as a nine months' illness. There is much misinformation being circulated by "bridge table obstetricians," and unless the patient has been informed previously this may be a source of a great deal of worry to her. General hygiene and the diet during pregnancy should be included in the discussion. The old saying that a pregnant woman must eat for two is one of those half truths which has done far more harm than good. The fallacy of this statement lies in the fact that it implies the necessity for a great increase in the quantity of food eaten. This is quite wrong and, if heeded, will result in appalling accretions of fat which may never be lost and may even eventuate in certain complications. If viewed from the quality of the diet, the old saying has much to recommend it since the foods eaten in pregnancy must not only meet the requirements of the mother's tissues but must include a wide variety of food elements, particularly minerals and vitamins, which are necessary for the building of the baby's body. The patient should be advised against high caloric foods in order to keep the weight gain within twenty-five pounds. In brief, the diet of pregnancy should contain the following foods eaten liberally each day:

1. Milk (one quart). If there is tendency to excessive weight gain, skim milk should be substituted for whole milk.

2. Leaf and stem vegetables (two kinds, one raw).

3. Fresh fruits (at least the equivalent of one orange).

4. Eggs and meat in moderate amounts.

5. Whole-wheat bread and cereal.

During the winter months, and unless the patient has adequate exposure to sunlight, cod liver oil in some form should be advised to insure an adequate intake of Vitamin D.

A brief discussion of the general hygiene of pregnancy is of value. The two important considerations in regard to the expectant mother's wardrobe are that her clothes should be comfortable and attractive. With attractive clothing the patient feels at ease in company, which makes for a

much better mental outlook. Tight circular garters and rolled stockings should be forbidden, especially during the last four months, because of interference with venous circulation. The shoes worn should not have high heels since this only accentuates the compensatory lordosis which develops due to the weight of the enlarging abdomen. High heels are also prone to increase the danger of tripping or falling. Many women find that a maternity corset adds to their comfort during the last four months. A well-fitted corset will also minimize the backache which is so frequently present in the last trimester. The breasts are much more comfortable when they are supported by a brassiere of the uplift or sling type which lifts each breast upward and inward toward the opposite shoulder. During the last six to eight weeks tub baths should give way to daily sponge or shower baths. Douches of plain warm water may be taken but should be avoided during the time of the second and third missed menstrual periods, and should be forbidden during the last six weeks. Sexual intercourse is permissible in moderation until the last six weeks, although it should be curtailed during the second and third months.

Regular exercise in the open air is desirable but should never be carried to the point of fatigue. Ordinary household duties are permissible but, for obvious reasons, any heavy work should be avoided. Vigorous sports such as tennis, horseback riding and bicycling should be forbidden because of the danger of falling. Swimming, golfing and dancing in moderation are as a rule permissible. Automobile trips of more than one hundred miles a day should be avoided as far as possible. Any long trips which are necessary should be taken by train.

The patient should be instructed and urged to consult her dentist at an early date and have a thorough dental examination. The old adage of a "tooth for every baby" is not necessarily true. It is well-recognized that dental caries tends to progress more rapidly during pregnancy, but by proper diet and adequate dental care this can be prevented to a great extent. Contrary to somewhat prevalent lay belief, any necessary dental work can be done safely and should be carried out.

After completion of the initial prenatal examination, the patient should be instructed to return each month during the first seven months, and at least every two weeks during the last two months. These visits need not be time consuming. A few simple questions regarding the patient's general welfare should be asked, following which the blood pressure should be taken, the patient weighed and a urine specimen obtained. Some physicians prefer to make a brief abdominal examination, but

this is not absolutely essential in the early months. These routine examinations may seem somewhat tedious and uninteresting, yet it is only by carrying them out carefully that serious complications of pregnancy will be detected at an early stage, which is essential to reducing the maternal mortality and morbidity.

The greatest single aid in prevention of obstetric morbidity lies in adequate postpartum care. In our effort to promote prenatal care, the care of the woman after labor has been somewhat neglected. Probably only half of the women who receive prenatal care are examined postnatally. The postpartum period is one of the most important periods in the life of a woman. At no other period are so many physiologic changes occurring in the body, and at the same time so many pathologic conditions being repaired.

The postpartum examination should be carried out six to eight weeks after delivery. At this time careful attention should be paid to the cervix, since chronic inflammation of this organ leads to much subsequent pain and discomfort. It is the cause of much chronic discharge which is often seen in the parous woman, as well as the cause of recurrent cystitis and parametritis. If chronic cervicitis is present, as evidenced by erosion or thick mucopurulent discharge, active treatment should be instituted. The most effective therapy is actual cautery. This should be carried out several days after cessation of the menses if the patient is again menstruating. The involved areas should be striped radially and precaution taken not to burn too deeply in order to avoid the possible danger of subsequent stricture. The patient should be warned that heavy discharge and possibly slight spotting may be expected and should be instructed to take a hot douche, preferably with powdered alum or some other mild astringent in it. The cervix should again be inspected in six to eight weeks, at which time cautery may be necessary in isolated unhealed areas.

During the course of the postpartum visit, the patient should be questioned concerning backache. This is a frequent, troublesome symptom and is often due to a mild sacro-iliac strain, and much relief may be obtained from a properly fitted sacro-iliac corset. Frequently at the postpartum examination the uterus is found to be retroverted. The rôle of uterine retroversion in the production of symptoms is a debated question among gynecologic authorities. Many men now feel that this condition rather infrequently produces symptoms. It is beyond the scope of this paper to discuss this question fully, but suffice it to say that it is generally agreed surgical correction is not indicated

unless the symptoms cannot be relieved by anteversion maintained with a pessary.

In conclusion, it is emphasized that the procedures outlined may be carried out by any qualified physician with a minimum of equipment and will amply repay him in dividends of many satisfied obstetric patients.

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FATALITY FROM ACUTE ALCOHOLIC POISONING COMPLICATED BY EXTREME CEREBRAL EDEMA

REPORT OF A CASE

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Death from acute alcoholic poisoning is uncommon. Examination of the Quarterly Cumulative Index Medicus reveals very little information pertaining to this subject. Ciafarro and Moirano¹ in 1938 described the condition in a brief article. Sollmann² states that death from acute alcoholic poisoning is relatively rare and that it generally occurs within twenty-four hours. Recovery from alcoholic coma of thirteen hours' duration is exceptional according to this authority.

The following case was characterized by a tremendous cerebral edema.

CASE REPORT

Chief Complaint: W. D., a white male 49 years of age, was admitted in a state of deep coma to the accident ward of Jewish Hospital, Philadelphia, Pennsylvania, at 7:15 p. m. April 21, 1937.

History: The medical, surgical and family histories could not be obtained because of the patient's condition. Relatives who were contacted later could furnish no pertinent information.

Present Illness: The onset of the present illness began on the morning of April 21, 1937, when the patient purchased a quart of whisky. He then retired to his room and failed to appear for dinner at noon. At 7:00 p. m. he was discovered lying unconscious on the floor of his room. The bottle containing the whisky which he had purchased that morning stood on a dresser with only four ounces remaining in it. There was no sign of any whisky having been spilled on the dresser, bed or floor; and no evidence of additional liquor or empty liquor bottles was seen in his room. As far as could

be determined the patient had not left his room from 9:30 a. m. to the time of his discovery at 7:00 p. m. the same day and, furthermore, he had had no visitors during that period.

Physical Examination: The patient was observed lying on the examining table in a state of deep coma. No dyspnea or cyanosis was present but there was an extremely strong odor of alcohol on the breath. Talking and shaking failed to rouse the patient from his stupor at this time. The axillary temperature was 96.4 degrees; the pulse was 128 per minute and was regular but of poor quality; the respirations were 26 per minute and the blood pressure was then 88/62. The skin was pale and clammy and the forehead beaded with drops of perspiration. The pupils were dilated and did not react to light stimulus. The head showed no external evidence of injury. There was no nuchal rigidity, no cervical adenopathy and the thyroid gland was not palpable. The mouth was opened for examination, and a very strong odor of alcohol was immediately perceptible on the patient's breath. The teeth were in poor condition with many teeth missing and several extensive caries clearly visible. There was no bleeding from the mouth; the tongue was lying in the normal position, and no obstruction to breathing was present at this time. There was no hemorrhage from the nose and ears. The chest was normal to palpation, percussion and auscultation. The heart showed no enlargement to percussion. The position to the left cardiac border was ten centimeters from the midsternal line. The apex beat was faintly palpable in the left fifth interspace. No murmurs and no arrhythmias were heard. The cardiac sounds, which were barely audible by stethoscope, were of poor quality. The abdomen was relaxed and no masses were palpated. No scars were present. The extremities were cold and a flaccid paralysis of the arms and legs had occurred. The biceps, knee jerk and Achilles tendon reflexes were absent. Babinski's sign was negative on both sides.

Clinical Diagnosis: Coma due to acute alcoholism.

Course in the Hospital: At 8:45 p. m. the condition of the patient took a sudden grave turn for the worse. Marked cyanosis developed and the pulse became imperceptible. Blood pressure readings were unobtainable. The pupils remained dilated and failed to contract to light stimulation. The skin was cold and clammy on palpation and the extremities became rigid in the flexed position. The patient gradually became weaker until respirations ceased at 11:15 p. m., four hours after admission. The heart action stopped one minute later at 11:16 p. m.

Treatment: During the four hour period in the accident ward every possible form of supportive medical care was administered. Immediately after admission brief inhalations of aromatic spirits of ammonia were attempted, the patient's face was slapped with a cold, wet towel, he was shaken and talked to, but when no response was obtained this treatment was discontinued. Heat was then supplied in the form of blankets and hot water bottles. Inhalation therapy of a mixture of 90 per cent oxygen and 10 per cent carbon dioxide was initiated in an effort to stimulate respiration and increase the oxidation of the alcohol. No definite improvement resulted and a lumbar puncture was performed. The Ayer water manometer recorded a spinal fluid pressure of 100 millimeters with the patient in the recumbent position. Twenty cubic centimeters of spinal fluid were removed and collected in two test tubes. The first test tube contained slightly bloody spinal fluid, but the contents of the second tube were clear. The following drugs were used, with the respective dosage and routes of administration: adrenalin, 1:1,000 solution, two hypodermic injections of ten minims; coramine, one ampule by vein and two ampules by hypodermic injection; caffeine sodiobenzoate, one ampule by vein; sterile 50 per cent glucose solution, 50 cubic centimeters by the intravenous route. Despite this prompt and energetic treatment, the patient succumbed.

Laboratory Report: The spinal fluid showed a slightly positive test for globulin. A cell count was not done. A few bacteria were seen in a stained smear, but the spinal fluid culture was sterile. At the time of hospital admission neither the laboratory help nor the technical facilities were available for the determination of the blood alcohol concentration. A quantitative estimation of the concentration of alcohol in the brain was suggested at the time of autopsy, but again the technical facilities for the performance of this test were lacking. A catheterized specimen of urine was negative for albumin, sugar acetone, pus, casts and red blood cells. The specific gravity was 1.025.

Autopsy Report: The body was that of a well-nourished, adult, white male. No external signs of injury were visible. There was no edema of the lower extremities. A hydrocele, which was the size of a small orange, was present on the left side. There were some pleural adhesions between the right lower lobe anteriorly and the chest wall. A slight degree of congestion was present at both lung bases. The amount of fluid in both pleural cavities was normal. The heart was normal in size and the pericardial sac contained a normal

amount of serous fluid. The valves were normal but the myocardium showed some degeneration and softening. The coronary arteries were slightly atheromatous, but there were no signs of acute or chronic coronary occlusion. The liver, kidney and spleen were all slightly congested. The gallbladder was normal. No gross pathologic changes were seen in the stomach, small intestine, large intestine, rectum or bladder. On removal of the calvarium the cerebrum escaped from the skull under great pressure and the entire brain was seen to be in a condition of tremendous edema. The gyri and sulci were practically obliterated by the extensive swelling. Many petechial hemorrhages were seen on the external surface of the cerebrum, yet no gross hemorrhages were discernible. The surface veins were moderately distended. Sections of the brain likewise revealed the presence of many petechial hemorrhages. No thromboses or gross hemorrhages were present. The pons and medulla were extremely edematous and sections again disclosed many petechial hemorrhages throughout. The ventricles were moderately distended with clear cerebrospinal fluid under moderate pressure. There was no herniation of the brain stem through the foramen occipitale magnum, but there appeared to be considerable pressure of the bony rim enclosing the foramen magnum upon a greatly edematous brain stem. The skull on gross examination showed no evidence of fracture.

Anatomic Diagnosis:

1. Acute cerebral edema (severe) accompanied by many petechial hemorrhages.
2. Congestion of the lungs, liver, kidneys and spleen (slight).
3. Chronic myocarditis.

DISCUSSION

Death in this case was due to paralysis of the respiratory center located in the medulla. The medulla showed extreme edema, and on section extensive petechial hemorrhages were seen. In addition, it was evident that considerable pressure was exerted on the edematous medulla by portions of the hard unyielding bony rim of the foramen occipitale magnum. It is interesting to note that cardiac action ceased one minute after respirations had stopped, which signified a respiratory death rather than death due to cardiac failure. No evidences of skull fracture, cerebral hemorrhage, uremia or diabetes were present which might have confused the cause of the coma.

At this point, mention is made of the work of Moore and Gray,³ who in 1939 reported six instances of acute cerebral edema in 75 fatal cases of alcoholism among 16,054 alcoholic patients ad-

mitted to the Haymarket Square Relief Station, Boston, Massachusetts, from 1923 to 1938, inclusive.

SUMMARY

1. A case of fatal acute alcoholic poisoning in a white male forty-nine years of age has been described.

2. Autopsy examination of the brain revealed the presence of a particularly severe form of generalized cerebral edema accompanied by many petechial hemorrhages.

3. The lethal dose of whisky in this instance was apparently twenty-eight ounces, which was consumed during a period not exceeding nine and one-half hours.

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LABORATORY AND CLINICAL FINDINGS OF PANCREATIC DISEASES*

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The purpose of this paper is to present some of the clinical and laboratory aids which are useful in the diagnosis of pancreatic disease. Abnormal function of the islands of Langerhans will deliberately be excluded from the discussion. The most common disorders which we encounter are: first, carcinoma of the pancreas; second, achylia pancreatica, due either to calculi or fibrosis of the pancreas; and third, acute pancreatitis. It is apparent that an article of this type must consist primarily of a review of the literature, since private practice does not yield a sufficient number of these cases to afford many original thoughts or opportunities for original research on the subject.

Berk,¹ in a recent review of the literature on carcinoma of the pancreas, reviews a large number of cases and, in adding thirty-four of his own, contributes such a complete and interesting discussion of this illness that I wish to present most of the salient points in his paper.

Most of us have regarded a painless progressive jaundice as the primary and most important symptom of carcinoma of the pancreas. The following

figures show the accuracy of clinical diagnosis and the reasons for error:

DIAGNOSTIC ACCURACY

Number of cases—132.
Cases correctly diagnosed—36 (27.2 per cent).
Sex distribution—males, 799; females, 329.
Incidence—approximately 0.3 to 0.75 per cent of all autopsies.
Duration of symptoms (759 cases)—7.1 months.

	EARLY SYMPTOMS Study of 379 Cases				
	Per Cent with Pain	Per Cent with Jaundice	Per Cent with Weight Loss	Per Cent with Anorexia	Per Cent with Gastro-intestinal Disturbance
Initial Symptoms.....	49.0	22.0	14.5	17.5	34.6
Symptoms sometime during illness.....	76.4	68.5	87.4	44.4	53.2

You will note that pain was the initial symptom in half of the cases as compared to jaundice occurring in only one-fourth of the cases. Weight loss and anorexia are naturally to be expected in any malignant process involving the gastro-intestinal tract, as well as the gastro-intestinal disturbance which occurred in approximately one-third of the cases. It is also interesting to note that whereas pain occurred in three-fourths of the cases at some time during the illness, jaundice was not present with such frequency. Weight loss naturally was almost universal. The physical findings, as you will note from the following figures, were not specific:

	PHYSICAL FINDINGS	Percentage of Occurrence
Palpable liver		63.2
Distended palpable gallbladder Clinically		50.9
At autopsy		87.3
Palpable pancreatic mass.....		37.3
Ascites, preoperative or ante mortem.....		15.6

The majority of these findings occur from involvement of the surrounding organs. The diagnosis generally cannot be made on the basis of findings alone. The palpable liver, which occurred in 63 per cent of these cases, cannot be used as an accurate index. In many individuals it is possible to feel the edge of the liver, and it has been shown that only about 50 per cent agreement exists between clinical enlargement of the liver and enlargement as found at autopsy. The distended palpable gallbladder was present in one-half of these cases clinically, and according to Courvoisier's law, should have been present in all cases. It was, as you will note, present in 87 per cent of these cases at autopsy, but again we must remember that a palpable gallbladder is found in other illnesses. The palpable mass in the pancreas, while present in approximately one-third of these cases, is not too significant because many of these persons are seen so late in the illness that the diagnosis is apparent from other standpoints. Ascites was present in the relatively small proportion of 15.6 per cent, although at autopsy it was demonstrated as occurring in a much larger group.

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

We note that the laboratory findings also are characterized by their nonspecificity:

LABORATORY FINDINGS	Percentage of Occurrence
Disturbed carbohydrate metabolism	
Glycosuria	9.4
Hyperglycemia	19.4
Impaired sugar tolerance (Berk)	20.8
Precedent diabetes mellitus	6.9
Roentgenologic findings	37.0
Obstruction of duodenum at some point	
Deformity of pylorus at duodenum	
Widened sweep of duodenum	
Anemia (142 cases)	32.4
Average red blood cell count—4,040,000	
Average hemoglobin determination—75.7 per cent	
Hyperlipemia, Johnson-Bockus method (11 cases)	54.5
Lipase above 1 cubic centimeter of 20 normal sodium hydroxide	
Secretin test (3 cases)	
Melena	27.5
Fatty stools	9.7

One can expect metabolic changes only in those cases where the disease has altered the function of the islands of Langerhans, and the percentage observations, even with the accurate determinations which Berk was able to make on his cases, give us only 20 per cent accuracy. Precedent diabetes mellitus, although present in 7 per cent of these cases, cannot be regarded as specific because of the high general incidence of diabetes. The x-ray examinations are definitely of inestimable value; in thirty-seven per cent of these individuals positive conditions were noted, which consisted of an obstruction of the duodenum at some point, a deformity of the pylorus and the duodenum, or a widened sweep of the duodenum as it circles the pancreas. The fact that anemia was present in only 32.4 per cent of the cases is of little value diagnostically when one considers the average red blood count and the average hemoglobin determination. Hyperlipemia, as estimated by the Johnson-Bockus² method, was present in approximately one-half of the eleven cases studied. Although a secretin test is seemingly of great value in the diagnosis of illnesses of the pancreas, it has not been used sufficiently by Berk to judge its value in carcinoma. It would seem that it should be almost universally positive if the illness has advanced to any appreciable degree. A more detailed discussion of this test is given later. Melena was present in 27.5 per cent of the cases and, when present, is apt to confuse one with the possibility of the malignancy being in the intestinal tract. The incidence of fatty stools is surprisingly low considering its much higher occurrence in infectious disorders of the pancreas.

In brief, diagnostic accuracy of carcinoma of the pancreas is still very difficult. It must be said that a larger percentage of these cases will be diagnosed at the autopsy table or on the operating table than at the patient's bedside. Conversely, however, it is true that more thought given to the

possibility of a carcinoma of the pancreas being present in these indefinite cases would result in less diagnostic errors.

Of the disorders causing diminution of the external secretion of the acinar cells, we may primarily be concerned with chronic pancreatitis, pancreatic lithiasis and functional achylia. The major clinical findings of chronic pancreatitis are bulky stools with gross fat, having a fetid odor and a grey color; general asthenia; indefinite gastro-intestinal upset with anorexia and motor disturbance. The most typical single findings are the bulky stools with gross fat present and the distinctive grayish color and markedly fetid odor. The asthenia and the indefinite gastro-intestinal upset are not characteristic of this particular illness more than of any other. The following laboratory findings furnish considerable aid in diagnosis:

1. Microscopic examination of stools
Creatorrhea
Steatorrhea
Unexploded starch granules
2. Blood sugar concentrations
Flat curve—mouth
Normal curve—intravenous
Occasional diabetic curve—intravenous
3. High lipase and amylase content of the blood
Amylase—accuracy estimated 70 to 95 per cent
Lipase—accuracy estimated 40 to 70 per cent

The microscopic examination of the stool can be carried out by any physician and the nondigested muscle fibers and fat globules present are easily seen. The numerous starch granules are also easily identified. The concentration of blood sugar by means of the sugar tolerance test can be carried out in most laboratories. It is worthwhile to remember that the sugar tolerance test, when done by mouth, tends to show a rather flat curve. This is not due to alteration of the insulin-secreting islands as much as it is to the poor absorption of sugar because of the lack of the carbohydrate enzyme. The sugar tolerance test in these cases should be done by the intravenous method.

The next most important laboratory aid is the determination of the lipase and the amylase content of the blood. You will note the accuracy of these tests is high. The determination of the amylase content was estimated as having 70 to 95 per cent accuracy and lipase a 40 to 70 per cent accuracy as judged by examinations run on a large number of cases.

The secretin test is probably the most diagnostic of any of the laboratory tests of pancreatic

function and is an accurate measurement of amylase, trypsin, and lipase in the duodenal content. The double gastroduodenal tube is used in this test and it is best guided into position by the use of the fluoroscope, with the patient in a semi-reclining position.³ The duodenal content is fractionated into four periods of ten minutes each before stimulation and two periods of twenty minutes each after stimulation. Secretin is then administered intravenously (0.75 milligrams per kilogram of body weight). Within a minute or two following the injection there is an out-pouring of pancreatic juice, which soon loses its bile discoloration and remains colorless throughout the greater period of the test. The evaluation of the pancreatic function then depends upon the following factors: First, the volume of the flow; second, the concentration of bicarbonate; and third, the concentration and total quantity of the enzymes amylase, trypsin, and lipase. The content of amylase and lipase is measured by the method of Comfort and Osterberg.⁴

The diagnosis of chronic pancreatitis, therefore, is a distinct possibility if one is in a position to do, or rather have a laboratory do, the necessary laboratory procedures.

Pancreatic lithiasis generally has been regarded as a rarity, but recently Snell and Comfort⁵ have shown that a very careful x-ray study may remove this illness from the museum class. They report eighteen cases between January, 1937, and November, 1940, whereas previous autopsy records have emphasized its rarity. Dr. J. G. Mayo reported nine cases in 10,000 autopsies and the Cincinnati General Hospital reported only three in 7,402 autopsies. Snell and Comfort report the following clinical findings:

	No. of Cases
Colic	11
Motor disturbance gastro-intestinal tract	8
Diabetes	8
Weight loss	6
Diarrhea with fatty stools	8
Chills and fever	2
Hepatic enlargement	4
Ascites	1
Jaundice (undetermined origin)	1

You will note that eleven of these patients give the history of colic; the colic simulates gallbladder colic in severity and type. There were eight motor disturbances of the gastro-intestinal tract, characterized chiefly by pylorospasm and gastrospasm with occasional vomiting.

X-ray evidence, of course, is of value in confirming the diagnosis. The calculi are sharply outlined when present, and are seen best with oblique roentgenograms. They are found in an area bounded above by the upper level of the first lumbar vertebra, and below by the lower border of the third lumbar vertebra. The most common

grouping is that of the multiple irregular calculi. Single calculi, calculi with multiple facets, and the large fragmented stones which form a cast of the pancreas naturally are much more rare. Other helpful laboratory findings are those of pancreatic insufficiencies, the steatorrhea, the diminution of duodenal amylase and lipase and quite often a transient elevation of the serum lipase and amylase content.

Functional achylia pancreatica is placed last in this group since, naturally, doubt may exist that this group is anything more than misdiagnosed calculi or inflammation. The clinical findings, which are practically in accord with those previously mentioned, are nervous indigestion; visual symptoms, Vitamin A deficiency; rheumatic symptoms occurring in patients between forty and fifty years of age; diarrhea; and cachexia.

The story of motor disturbance, rheumatic symptoms, visual symptoms, diarrhea and mild cachexia occurring in an individual between forty and fifty years of age should make one suspicious of a poorly functioning pancreas. Recent studies tend to show definite Vitamin A deficiency in these individuals. The laboratory findings would, of course, be the same as those for chronic pancreatitis.

Acute pancreatitis, with or without fat necrosis, is rather common as compared to the other disorders discussed. The salient clinical features of this dramatic illness have been reviewed in the literature many times. The violent epigastric pain which these people experience tends to radiate to the back and may be differentiated in some instances from acute gallbladder colic by the fact that there tends to be a left-sided radiation and occasionally radiation into the precordial area. Slight relief is often obtained by the patient assuming a sitting position and leaning forward. The acute tenderness and rigidity would naturally follow any acute upper abdominal inflammation. Previous gallbladder history is present in a great majority of these cases, although its diagnostic value is not too great. It is usually accompanied by shock, which in the early stages is characterized by a rapid, low pulse, and subnormal temperature. A palpable pancreatic mass is an important clinical feature, but it is obvious that great difficulty would be encountered in attempting to palpate the abdomen in the acute stage. Laboratory procedures in an individual with acute pancreatitis are of limited use. A patient who is this ill certainly presents some problems in connection with the technic involved in carrying out the tests.

The usual findings of an inflammatory reaction,

such as an increased white blood cell count and temperatures higher than normal, are to be expected. An elevation of temperature naturally occurs after the stage of shock has passed. The greatest single laboratory aid, as suggested by Comfort,³ is the early and marked elevation of the serum amylase and lipase. This reaches its maximum in twelve to twenty-four hours and statistically is 90 per cent accurate. The drop in serum lipase and amylase parallels the clinical course as improvement occurs. Glycosuria is described in from 50 to 100 per cent of cases by various authors; however, this may occur with other acute abdominal diseases and occasionally with coronary thrombosis. Its diagnostic value is therefore questionable. A diminution of the duodenal amylase and lipase content as judged by the secretin test occurs in almost all cases but, of course, can only be demonstrated late in the illness. Mention must also be made of one other laboratory procedure which shows possibilities. It has been omitted from the detailed discussion of the various diseases because few reports are available concerning its use in human beings. I refer to the relationship of lipocaine and fat metabolism. Whether it is a true pancreatic enzyme still is questionable, but there seems little doubt that the fatty infiltration which occurs in reasonable frequency with pancreatic necrosis can be controlled by its administration. Identical fatty infiltration occurs with other conditions not connected with the pancreas and is also induced by dietetic regimes. Its specificity may then be questioned.

In attempting to summarize and separate the valuable diagnostic aids from the less valuable, one is impressed by the sensibility of the serum amylase and lipase tests in acute pancreatitis and the value of the secretin test in the chronic disorders. A review of one hundred thirty secretin tests done by Diamond and Siegel⁶ demonstrates the high degree of accuracy of this test. These two examinations are probably the most direct estimate we have of the function or non-function of the acinar cells, and it is apparent that they cannot be widely employed. The technic and physical equipment involved make their use definitely limited to the larger laboratories. The physical findings, as in most upper abdominal illnesses, will of necessity remain slightly vague and indefinite, since most of them are the findings resultant from simultaneous or late involvement of adjacent organs. If more thought and consideration might be given to the possibility of pancreatic disease in these more or less obscure upper abdominal complaints, it no doubt would result in reducing a present high diagnostic error.

Discussion

Dr. Fred H. Lamb, Davenport: I think we may safely conclude that there are now reliable laboratory aids in the diagnosis and recognition of pancreatitis. Osterberg, Comfort, Ellman, Diamond and others have done the preliminary work in not only standardizing tests which are now useful but also in making many determinations of the lipase and the amylase values in normal individuals. Determination of lipase and amylase in the blood is not difficult, neither is the examination of the duodenal content following injection of pure secretin into the blood. In the latter case, however, it is difficult to obtain proper specimens of the duodenal content from a patient who is severely ill.

Ellman in a recent article urges that a serum amylase test be made in all cases of acute upper abdominal pain. Referring to his own experience, he reports several cases in which these values increased from twenty to thirty times their normal amounts, and he feels that high amylase and lipase values are almost diagnostic of acute pancreatitis. We must remember, however, that these tests are functional in nature; they do not necessarily reflect the type or even the degree of anatomical change in the pancreas. Since the other conditions which might be confused with acute pancreatitis, such as perforating peptic ulcer, acute cholecystitis or acute appendicitis, require surgical intervention and since it is very difficult to differentiate acute pancreatitis from acute hemorrhagic and necrotic disease of the pancreas, which conditions are more safely treated by incision and drainage, it will probably be some time before clinicians will be willing to depend solely on amylase and lipase determinations in the blood for a decision as to laparotomy in these cases.

Dr. William D. Paul, Iowa City: Dr. Meyer has called attention to the syndrome of acute pancreatitis. At the University Hospital we have been aware of this disease but see it only occasionally. Dr. O'Brien of the Department of Surgery has reviewed the case histories of all patients with acute pancreatitis and I am indebted to him for the following statistics.

During the past four years acute pancreatitis was diagnosed or found at autopsy in twenty patients. Of these six were diagnosed at time of operation, twelve during postmortem examination and two were diagnosed clinically. This makes an incidence of one case of pancreatitis in 11,895 admissions to the hospital, or one in 1,892 admissions to the surgical service. Of the six patients who were explored, one had symptoms for twelve hours, two for two days, one for six days, one for nine days and one for thirty days. Two of these patients were men and four were women. Their ages varied from forty-seven to sixty years, the average being fifty-two years. Tenderness and rigidity were present in all of the patients. An abdominal mass was palpated in half of the series. Five of the six patients had a history of previous attacks varying from four months to five years prior to the time of admission. Whipple of

New York states that shock is very common, but none of our patients suffered from severe shock. The systolic blood pressure varied from 105 to 144 millimeters and the diastolic from 65 to 102 millimeters. The radial pulse rate ranged preoperatively from 60 to 120 per minute. The temperature on admission ranged from 99.4 to 101 degrees. Only one patient developed postoperative shock. Jaundice and pruritis were present in half of the patients. Leukocytosis was a consistent finding, the white blood cell count varying from 5,800 to 22,400 per cubic millimeter. There was no retention of blood urea nitrogen and the carbon dioxide combining power of the plasma was within normal limits.

It can be seen from the foregoing that there are no definite signs or findings pathognomonic of pancreatitis. The essayist has shown that the only test which is reliable in this disorder is an evaluation of the blood amylase and lipase. It is agreed that the diagnosis of pancreatitis could be made more often if the blood enzymes were determined on all so-called "surgical abdomens." This is well illustrated by the experience at the Henry Ford Hospital where the incidence of the recognition of acute pancreatitis increased from one in 10,000 to one in 4,000 after the determination of serum amylase became routine.

There is only one other point I wish to make and that is, is it better to operate soon or to wait? I am not a surgeon; I can only take some of the ideas from the surgeons of the present time. Whipple states his mortality rate was 35 per cent in those on whom he operated immediately. In those whom he left alone the mortality rate was 17 per cent, and I think most surgeons now believe that conservative treatment for acute pancreatitis is preferred.

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Congress of American College of Surgeons Cancelled

The annual congress of the American College of Surgeons, which was scheduled to be held in Cleveland November 17 to 20, 1942, was cancelled by the Board of Regents of the College at a meeting held in Chicago October 14.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

CONGENITAL FIBROUS CORDS WITH INTESTINAL OBSTRUCTION IN CHILDREN

F. P. McNAMARA, M.D., Dubuque

The two cases to be described are similar in that the intestine in each patient became incarcerated by tough fibrous cords which resembled sutures. In each instance the cords extended from the mesentery to the terminal portion of the ileum. In our review of the literature we have found no identical cases, although congenital adhesions and bands are well known.

CASE REPORT I

The patient, a girl nine months of age who previously had been considered well, was treated at home when she began to vomit two days before death. Castor oil and enemas were given without results and the upper abdomen became distended. Food was forbidden. The next day, since the vomiting still persisted, enemas were tried again

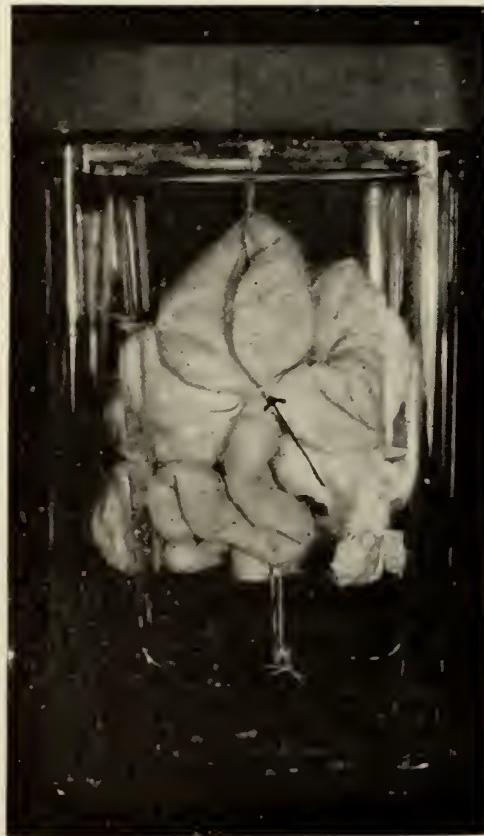


Fig. 1. Photograph of a museum, a fibrous cord binding a loop of bowel. Case 1.

unsuccessfully. The baby died that night.

Clinical Diagnosis: Undetermined.

AUTOPSY ABSTRACT

The body was that of a thin, pale child weighing eleven pounds. Brown fluid with a fecal odor exuded from the mouth. The abdomen was distended and tense. On opening the abdomen, the peritoneal cavity was found to contain one hundred cubic centimeters of faintly opalescent fluid. The upper portion of the small intestine and the stomach were distended with fluid, gas and fecal material; the terminal twenty centimeters of the ileum and the colon were collapsed; and the appendix was normal. Twenty centimeters from the ileocecal valve, a fibrous cord resembling a suture extended from the mesentery to the ileum and two loops of the ileum had been caught behind it and bound firmly. The loops were red and faintly granular (Figure 1). Adjacent to the obstruction, there were swollen mesenteric lymph nodes which on microscopic examination were found to be infiltrated with a moderate number of leukocytes. There was fibrinous exudate over the mesentery. The remainder of the examination was negative.

Primary Anatomic Diagnosis: Congenital fibrous cord from mesentery to ileum; incarceration of a loop of ileum with bowel obstruction; acute mesenteric lymphadenitis; acute peritonitis.

Subsidiary Anatomic Diagnosis: Secondary anemia; emaciation.

CASE REPORT II

The patient, a boy three years of age, complained of not feeling well, asked for a drink of water and went to bed. When his mother went to see him an hour later, she found him dead.

Clinical Diagnosis: Undetermined.

AUTOPSY ABSTRACT

The body was that of a well developed and nourished white boy weighing forty pounds. Externally, the body showed some elevation of the abdominal wall. On opening the peritoneum, it was observed that the cavity contained one hundred cubic centimeters of blood-tinged fluid. The upper coils of the small intestines, the terminal portion of the ileum, the appendix and the colon were a normal pink color. Beginning about twenty-five centimeters above the ileocecal valve and extending for a distance of one hundred centimeters, the intestine was firm and was a dull, dark red. On opening this portion of the intestine, it was noted the lumen contained some fresh and considerable coagulated blood, and the wall

was infiltrated with hemorrhages (Figure 2). Microscopically, the picture was that of early gangrene. On dissection, a fibrous cord exactly like a catgut suture was found at the base of the strangulated coils of the ileum. This extended from the mesentery to the terminal portion of the ileum. The intestine had slipped behind the cord and had become twisted upon itself. The remainder of the examination was negative.

Anatomic Diagnosis: Congenital fibrous mesenteric cord; incarceration of the intestine with hemorrhage and early gangrene of the intestine; hemorrhagic ascites.

COMMENT

From a clinical viewpoint, these two cases present marked contrasts. In the second case, it is difficult to conceive how a child could have had four feet of gangrenous ileum with such slight preceding symptoms. If the child had been seen by a physician, it is possible that the mass in the abdomen might have been discovered and an exploratory laparotomy performed. However, it is doubtful whether the patient would have survived the extensive resection which would have been required.

In the first case, the history and clinical course indicated intestinal obstruction and this diagnosis should have been made. The diagnosis of bowel obstruction is sometimes difficult to make in children, but when a child vomits persistently for two days and there are no returns from enemas, the diagnosis should be made. Although it is important to determine the cause, if possible, the essential thing is to recognize the obstruction and to perform an early exploratory laparotomy. Too



Fig. 2. Photograph of the gangrenous loops of ileum strangulated by a cord-like fibrous adhesion. Case 2.

often children and even adults enter the hospital with histories which indicate vomiting for days, and it would seem that in these cases the diagnosis of obstruction is suspected only when the vomiting becomes fecal in character. If the diagnosis of obstruction had been made in this case, a glance at Figure 1 will indicate how easily it would have been to release the incarcerated bowel. Such a procedure would have been life-saving, since the bowel was still viable.

As previously mentioned, we have not found descriptions of similar fibrous cords in the literature, although this may be due to our misinterpretation of the terms used in describing abdominal adhesions. Bryant,¹ in 1922, called attention to the frequency of visceral adhesions or bands as a cause of chronic intestinal invalidism. In a study of 297 cases, he gave the following table indicating the seven most frequent types in both sexes:

ACTUAL ADHESIONS OR BANDS PRESENT
PERCENTAGE FREQUENCY, BOTH SEXES

Adhesions or Bands	Male per cent	Female per cent
Gallbladder to the duodenum and the transverse colon	25.6	24.8
Gallbladder to the transverse colon.....	17.2	9.4
Gallbladder to the duodenum.....	15.5	17.9
Appendix to the peritoneum.....	15.0	5.9
Omentum to the ascending and the transverse colon	11.1	12.0
Ascending colon to the transverse colon.....	10.6	5.9
Duodenum to the peritoneum.....	6.7	10.3

He concluded that the frequency with which adhesions or bands in the fetus occurred in both sexes was greatly underestimated. He found that only 5.9 per cent of a group of thirty-four fetal cases were free from demonstrable adhesions or bands and that 100 per cent of the eighteen male feti showed such variation from normal. From Bryant's description, it is impossible to say whether he referred to such cord-like structures as were present in these two cases, but it is possible that such was the fact in some instances. From a practical point of view, it is unlikely that most of these adhesions, bands or cords can be diagnosed except at exploratory laparotomy. Certainly the operation is imperative when the symptoms of intestinal obstruction are definite. The chance of curing intestinal obstruction decreases progressively as the duration of the obstruction is prolonged. Early diagnosis, as is true in many other conditions, is imperative in intestinal obstruction. In early childhood, the possibility of fibrous cords of congenital origin should always be kept in mind as a cause of intestinal obstruction.

REFERENCE

1. Bryant, John: Visceral adhesions and bands: normal incidence, a preliminary report. Amer. Jour. Med. Sc., clxiii:75-79 (January) 1922.

AMERICAN COLLEGE OF SURGEONS CANCELS CLINICAL CONGRESS

The annual Clinical Congress of the American College of Surgeons, which was scheduled to be held in Cleveland November 17 to 20, 1942, was cancelled by the Board of Regents of the College at a meeting held in Chicago, October 14. Motivated primarily by patriotism, the Regents were influenced by the present conditions surrounding the general war program which have led to a greater burden on the members of the surgical profession in their local communities as a result of the large proportion of the profession which is serving with the armed forces. The Regents by this action took cognizance of the desire of the profession to do nothing which would interfere with the successful prosecution of the war program such as would be caused by temporary absence of its members from civilian duties during the period of the Congress, embarrassment of the transportation system, and interference with the work of the local profession in Cleveland in preparations and presentations incident to such a meeting.

THE 1943 MEETING OF THE AMERICAN MEDICAL ASSOCIATION CANCELLED

The annual meeting of the American Medical Association, which was to convene in San Francisco in 1943, has been cancelled by the Board of Trustees. Facts influencing their decision were the problems of transportation for the large number of doctors attending such a meeting, and the fact that the meeting would make great demands on the time and energy of the doctors remaining in practice. The American Medical Association, through its House of Delegates and its Board of Trustees, has pledged itself to make every possible contribution to the war effort, and in accord with that pledge feels that cancellation of the 1943 meeting is in the best interests of the nation and the medical profession.

The House of Delegates of the American Medical Association will probably be called into session in Chicago sometime in June, 1943, to transact the necessary business of the Association. Such a meeting will involve relatively little transportation and very few doctors, and should not disrupt medical services to the civilian population nor the transportation facilities of the country.

REPRINTS of the editorial, "It Would Help," which appeared in the October issue of the Journal, are available to physicians for distribution among their patients. Write to the Journal of the Iowa State Medical Society, 505 Bankers Trust Building, Des Moines, Iowa.

STATE DEPARTMENT OF HEALTH

Walter Diering

AGGLUTINATION AND SKIN TESTS FOR BRUCELLOSIS IN RELATION TO RAW MILK SUPPLIES

Direct contact with infected animals and use of raw milk products from infected dairy cows are doubtless the chief means of transmission of brucellosis to man. Cases resulting from contact occur sporadically, but probably exceed in number those traceable to contaminated dairy products. Milk-borne disease is likewise of sporadic occurrence when the bovine type of organism, *Brucella abortus*, is the etiologic agent; on the other hand, an epidemic of brucellosis may be expected when the porcine strain (*Brucella suis*) gains access to the udder of a dairy cow to contaminate a raw milk supply.

During the past year, investigation of sporadic cases of brucellosis caused by *Brucella abortus*, and of a milk-borne outbreak with *Brucella suis* as the inciting agent, led to agglutination and skin test surveys in several Iowa communities.

Results of these surveys are summarized in the accompanying tables.

Survey Among Persons Exposed to *Brucella Abortus*

On July 2, 1942, A. L., 68 years of age, a resident of Madrid, Boone County, Iowa, began to complain of a tired feeling, pain in back of the neck, fever (102 degrees), chills and sweats. Three weeks later, the patient's serum was reported by the State Hygienic Laboratory to have agglutinated brucella antigen in dilutions 1:1280. The patient gave no history of contact with farm animals. Prior to the illness, however, the patient had used two glasses of raw milk daily from a local dairy. Of the thirteen dairy cows in the dairy concerned, nine proved reactors to the agglutination test for Bang's disease. No raw milk was sold to patrons from the dairy after July 31.

Arrangement was made, in cooperation with

TABLE I

Agglutination Tests for Brucellosis in Relation (1) to a Raw Milk Supply Contaminated with *Brucella Abortus* and (2) to Other Milk Supplies in Madrid (Boone County), Iowa, 1942

Age Group	CONTAMINATED MILK SUPPLY						OTHER MILK SUPPLIES						ALL MILK SUPPLIES						
	Agglutination Reaction						Agglutination Reaction						Agglutination Reaction						
	Number Tested	Negative No.	Negative Per cent	Positive 1:5	Positive 1:40	Positive 1:80	Number Tested	Negative No.	Negative Per cent	Positive 1:5	Positive 1:40	Positive 1:80	Number Tested	Negative No.	Negative Per cent	Positive 1:5	Positive 1:40	Positive 1:80	Per cent
1-9	1	1	100.0	—	—	—	4	4	100.0	—	—	—	5	5	100.0	—	—	—	—
10-19	14	10	71.4	4	—	28.6	46	36	78.3	9	1	21.7	60	46	76.7	13	1	23.3	
20 and over	48	34	70.8	13	1	29.2	34	27	79.4	7	—	20.6	82	61	74.4	20	1	25.6	
Totals	63	45	71.4	17	1	28.6	84	67	79.8	16	1	20.2	147	112	76.2	33	2	23.8	

TABLE II

Skin Tests with Brucellergen in Relation (1) to a Raw Milk Supply Contaminated with *Brucella Abortus* and (2) to Other Milk Supplies in Madrid (Boone County), Iowa, 1942

Age Group	CONTAMINATED MILK SUPPLY						OTHER MILK SUPPLIES						ALL MILK SUPPLIES							
	Skin Test Reading						Skin Test Reading						Skin Test Reading							
	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent
1-9	13	13	100.0	—	—	14	14	100.0	—	—	27	27	100.0	—	—					
10-19	14	14	100.0	—	—	57	50	87.7	7	12.3	71	64	90.1	7	9.9					
20 and over	44	34	77.3	10	22.7	28	23	82.1	5	17.9	72	57	79.2	15	20.8					
Totals	71	61	85.9	10	14.1	99	87	87.9	12	12.1	170	148	87.1	22	12.9					

TABLE III

Agglutination Tests for Brucellosis in Relation (1) to a Raw Milk Supply Contaminated with *Brucella suis* and (2) to Other Sources of Milk in and Near Marcus (Cherokee County, Population 1,200), Iowa, 1941

Age Group	CONTAMINATED MILK				OTHER MILK SOURCES				TOTAL TESTED						
	Agglutination Reaction				Agglutination Reaction				Agglutination Reaction						
	Number Tested	Negative No.	Negative Per cent	Positive 1:80 Per cent 1:2560	Number Tested	Negative No.	Negative Per cent	Positive 1:80 Per cent 1:2560	Number Tested	Negative No.	Negative Per cent	Positive 1:80 Per cent 1:2560			
1-9	14	9	64.3	5	35.7	42	42	100.0	—	—	56	51	91.1	5	8.9
10-19	18	11	61.1	7	38.9	126	126	100.0	—	—	144	137	95.1	7	4.9
20 and over	1	1	100.0	—	—	3	3	100.0	—	—	4	4	100.0	—	—
Totals	33	21	63.7	12	36.3	171	171	100.0	—	—	204	192	94.1	12	5.9

TABLE IV

Skin Tests with Brucellergen in Relation (1) to a Raw Milk Supply Contaminated with *Brucella suis* and (2) to Other Milk Supplies at Marcus (Cherokee County, Population 1,200), Iowa, 1941

Age Group	CONTAMINATED MILK				OTHER SUPPLIES				TOTAL TESTED						
	Skin Test Reading				Skin Test Reading				Skin Test Reading						
	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent	Number Tested	Negative No.	Negative Per cent	Positive No.	Positive Per cent
1-9	23	8	34.8	15	65.2	70	65	92.9	5	7.1	93	73	78.5	20	21.5
10-19	33	7	21.2	26	78.8	85	75	88.2	10	11.8	118	82	69.5	36	30.5
20 and over	1	—	—	1	100.0	3	1	33.3	2	66.7	4	3	75.0	1	25.0
Totals	57	15	26.3	42	73.7	158	141	89.2	17	10.8	215	156	72.6	59	27.4

local physicians, the school superintendent and parents, for specimens to be obtained for the agglutination test and for skin tests to be administered with brucellergen, furnished through the courtesy of I. Forest Huddleson, D.V.M., of Michigan State College. Agglutination tests were carried out on the serum of 147 school children and adults; 170 persons were volunteers for the intradermal test.

Results of agglutination and skin tests are summarized in Tables I and II. It will be noted that the group exposed to the contaminated raw milk supply showed the presence of *brucella* agglutinins in 28.8 per cent of those tested, as compared with 20.2 per cent among users of other milk supplies. Skin tests were positive in slightly higher percentage (14.1 per cent) among persons who used milk from known infected cows than among those whose milk was obtained from other sources (12.1 per cent).

Survey Among Persons Exposed to *Brucella suis*

A milk-borne epidemic of brucellosis due to *Brucella suis* occurred at Marcus in Cherokee County during the last five months of 1941. *Brucella suis* was isolated from the blood of patients and from the cream of dairy cows from which milk had been obtained. (See JOURNAL, December, 1941, page 590.)

In order to obtain added information concerning the extent of infection, agglutination and skin test surveys were conducted in the Marcus schools, in cooperation with parents, school and health officials. Results of agglutination and skin tests are shown in Tables III and IV. Twelve children of school age, all of whom had been exposed to the contaminated milk supply, were found to have strongly positive agglutination reactions; these brought to 77 the total of active and latent cases. The data in Tables III and IV are significant, pointing to the fact that the porcine type, when introduced into a milk supply, is more highly virulent than the bovine strain of *Brucella*.

PREVALENCE OF DISEASE

Disease	Sept.'42	Aug. '42	Sept.'41	Most Cases Reported From
Diphtheria	45	18	8	Muscatine
Scarlet Fever	96	46	69	For the State
Typhoid Fever	6	6	14	For the State
Smallpox	0	0	1	None
Measles	33	51	28	For the State
Whooping Cough ..	80	128	95	Des Moines, Dubuque
Brucellosis	40	39	43	For the State
Chickenpox	12	22	25	For the State
German Measles	1	0	8	Cerro Gordo
Influenza	1	0	6	Boone
Mumps	58	62	75	Story, Greene
Pneumonia	34	18	40	Fremont
Poliomyelitis	20	16	4	For the State
Tuberculosis	114	68	48	For the State
Gonorrhea	162	119	113	For the State
Syphilis	214	237	152	For the State

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HOME NURSING COURSES AID PHYSICIANS*

In last month's issue of the JOURNAL we indicated some of the ways in which the civilian population might help in conserving its dwindling supply of medical personnel.

In this issue we wish to call attention to a program which has been in operation for a long time, but which now is being expanded rapidly in every state, county, and community in the nation, where facilities are available, to support professional services by educating civilians to follow medical instructions with understanding and skill. This is the program of the Red Cross for courses in home nursing. The goal, typical of Red Cross proportion, is "one person in every household trained in home nursing."

Each course consists of twelve two-hour periods of instruction, taught by a registered nurse usually on a volunteer basis, and is offered to groups of homemakers to prepare them to care better for their own families in both normal times and times of illness. Approximately half of the time is spent on demonstration and practice of simple nursing procedures. How to take temperatures, give baths, apply compresses, give enemas and carry out isolation technic are but a few of the fundamental subjects presented. Knowledge such as this on the part of someone in the family is a real aid, especially in the matter of time-saving, to the physician called in to attend an ill person.

The Red Cross instructs its local Home Nursing Chairmen to analyze the needs of their communities and to build their programs around these needs. The services of physicians are frequently

sought for assisting with institutes for instructors. Here it may be pointed out that for the few hours spent by the physician in this capacity the returns not only to himself but to his fellow practitioners will be manifold. The new Red Cross textbook, approved by the American Medical Association and the National Organization for Public Health Nursing, is available to anyone, regardless of whether or not the person is taking the course, and may be purchased through any Red Cross chapter office. It can be recommended safely to anyone as a standard family reference book, and should, in this emergency at least, be on the parlor table in all homes.

Nursing personnel, like medical personnel, is being sharply reduced. Inactive nurses are carrying approximately sixty per cent of the teaching load in the Home Nursing Courses. Their effort and their contribution deserve the recognition and the support of physicians everywhere. To hear his patients respond to his directions, "I understand, doctor, I learned how in the Home Nursing Course," will be music gratefully received to the ears of the harassed physicians in the difficult days ahead.

PRESENT KNOWLEDGE OF INFLUENZA

With the approach of the winter season, infections of the respiratory tract again come to the forefront to engage the attention of the physicians and to annoy the victims. While much is known concerning the bacterial forms of respiratory infections, much remains to be learned about the infections, which are presumably of virus etiology. Some progress, however, is being made in the field of influenza.

According to Horsfall¹ the clinical syndrome called influenza can be divided into three epidemiologic forms. The first of these, the pandemic form, is of the type suffered in this country during 1918 and 1919. Available data reveal the pandemics which have occurred during the last century and a half were separated by varying periods of from three to forty-two years. The cause of pandemic influenza is still unknown, but many workers believe a virus of one type or another initiates the infection. Bacterial infections of the respiratory tract commonly complicate this form of influenza. Although the sulfonamide drugs exert little or no influence on virus infections, it is altogether probable that they may be highly effective against the complicating bacterial infection should another pandemic occur in the future.

The second or epidemic form of influenza is known to occur in three different etiologic varie-

*The JOURNAL expresses its thanks to Mrs. Arthur H. Keyes, Chairman of Red Cross Home Nursing in Polk County, for the essential information in this editorial.

ties: influenza A, influenza B and influenza Y. A virus is responsible in each instance. Influenza A virus was first discovered in 1933 by Smith, Andrewes and Laidlaw in England. Influenza B virus was discovered independently by Magill and by Francis in 1940. While these two forms of influenza produce indistinguishable clinical infections, they can nevertheless be differentiated by laboratory methods. For instance, comparison of antibody levels in the serum during the acute phase and in convalescence may be employed to determine whether an infection has been due to one virus or to the other, or neither.

Unlike pandemic influenza, secondary bacterial infections of the respiratory tract are uncommon following either influenza A or influenza B. In other words, pneumonia is not likely to be observed as a complication to either of these forms of influenza. Influenza Y is the term applied to undoubted cases of epidemic influenza in which no evidence can be obtained that the infection was caused by the A or B viruses. The virus of influenza Y has as yet not been identified.

The third form discussed by Horsfall is endemic influenza, or sporadic grip, which commonly affects large numbers of persons each winter. Here again the etiologic virus remains undetermined. Clinical similarity between cases of endemic and epidemic influenza prevents their differentiation by this means. However, there is a strong tendency for secondary bacterial infection, particularly of the paranasal sinuses of the bronchi, to complicate endemic influenza.

Etiologic studies were carried on in 1,276 cases of epidemic influenza which occurred in twelve separate outbreaks in 1940 and 1941. Cases of influenza A were found in all but two epidemics, of influenza B in only five, and of influenza Y, of unknown cause, in all epidemics. In three of the epidemics all three varieties were found.

Experiments in specific prophylaxis, particularly against influenza A, have been conducted in the last five years. The results have not yielded conclusive proof of the value of vaccination. While evidence has been secured of a somewhat increased resistance following vaccination with influenza A virus, it nevertheless has been shown that its maximum effect persists for only about one month.

Horsfall's excellent summary of the present status of influenza is both encouraging and discouraging: encouraging because obviously a real beginning into the mystery of virus diseases has been accomplished, and discouraging because it is equally obvious that the time when effective im-

munization and specific therapy against influenza may be expected is still a long way in the future.

REFERENCE

1. Horsfall, Frank L., Jr.: The present status of the influenza problem. *Jour. Am. Med. Assn.*, cxx:284-287 (September 26 1942).

NO CERTIFICATION OF PROSTITUTES

Recently the JOURNAL received a communication from the American Social Hygiene Association concerning the venereal disease problem in prostitutes which we believe deserves the careful consideration of all physicians.

The communication first states the action taken by the House of Delegates of the American Medical Association at its 1942 session in Atlantic City relative to a resolution introduced by Dr. George Kosmak placing the medical profession on record against the medical inspection and certification of prostitutes.

The resolution as passed is as follows:

"Whereas, Published reports indicate an increasing prevalence of venereal disease in the armed forces and defense workers of this nation; and

"Whereas, Commercialized prostitution constitutes an outstanding factor in the dissemination of these diseases and requires an intensified campaign against their elimination; therefore be it

"Resolved, That the House of Delegates of the American Medical Association takes the following stand: (1) that the control of venereal disease requires elimination of commercialized prostitution, (2) that medical inspection of prostitutes is untrustworthy and inefficient, gives a false sense of security and fails to prevent the spread of infection, and (3) that prostitution is unlawful, and physicians who knowingly examine prostitutes for the purpose of providing them with medical certificates to be used in soliciting are participating in an illegal activity and are violating the principles of accepted professional ethics."

Because of its importance, the remainder of the communication is reprinted verbatim. It needs no further comment from us.

"Other authoritative medical opinions on this subject have been expressed recently. The Public Health Council of the State of New York on November 28, 1941, expressed its views in part as follows: 'In the opinion of the Public Health Council, so-called regulated prostitution including a medical examination of prostitutes is as dangerous now as it has been in the past and will wherever practiced lead to increased exposures and increased venereal infection.' On December 1, 1941, the New York Academy of Medicine Committee on Public Health Relations stated that it 'wishes to record its opinion that commercialized prostitution still constitutes a most serious health hazard and that so-called regulation of prostitution is thoroughly untrustworthy as a method of venereal disease control.' A statement issued by the Council of the Medical Society of the State of New York was dated December 11, 1941, and was similar to the resolution later passed by the American Medical Association.

"It will be noted that the American Medical Association declares that 'physicians who knowingly examine prostitutes to give them medical certificates to be used in soliciting were participating in an illegal activity and violating the principles of

accepted professional ethics.' In some states such practices are not only unethical but illegal. Thus, the laws of the State of New Jersey (Section 89-273i, Compiled Statutes 1910 with 1924 Cumulative Supplement) provides that no certificate of freedom from venereal disease shall be issued by any health officer or physician to any prostitute under any circumstances whatever. Similarly, laws of the State of Oregon (Chapter 320, Section 7, Oregon Code of 1930 with Laws of 1935) state that no certificate of freedom from venereal disease shall be issued by any health officer or physician or laboratory operator or other persons to any prostitute.

"Unfortunately, the type of physician who makes a practice of examining and certifying prostitutes is unlikely to be restrained, by ethical considerations, from aiding the prostitution racket by issuing certificates of one sort or another to help prostitutes lure customers. For the restraint of these unethical doctors laws similar to those of New Jersey and Oregon, mentioned above, should be on the statute books of every state now lacking such provisions. Such laws prevent flagrant practices such as the issuance of certificates over a doctor's signature stating that an individual has been examined by the signator on such and such a date and was found free from 'venereal disease' or 'from any infectious diseases.' Such certificates formerly were common and they were sometimes issued by quack doctors without the formality of any examination whatever.

"Nowadays this same type of doctor, sometimes guided by an equally unscrupulous lawyer, avoids the legal obstacle by giving prostitutes whom he may or may not examine a card or slip of paper stating that their blood was tested for syphilis on such and such a date and found 'negative'. Prostitutes assure prospective patrons that this means certain freedom from venereal disease—and the popular over-emphasis on the alleged infallibility of the blood test for syphilis often leads to acceptance of a negative serological report as a guarantee of freedom from syphilis and maybe gonorrhea as well.

"Prostitutes are quick to take advantage of anything which they may use to indicate that they are healthy. They often call themselves waitresses and so obtain food handlers' health cards. They use venereal disease clinic registration cards to support a claim that they are examined regularly by health department doctors. A prostitute-inmate of a brothel, in a city near which a great camp is situated, showed an investigator how she convinces skeptics who fear infection. She offered what she claimed was a 'health card' as proof of freedom from venereal disease. The card she had in her possession apparently was a treatment record which had been issued by the local health department. It bore the rubber stamped signature of the city health officer, and in chronological order listed the bismuth treatments she had received to date. These she palmed off on customers as 'shots' of a serum used to immunize one against syphilis. Rather cleverly she stated:

"Just like the boys in the Army are inoculated against smallpox . . . this stuff is given to us to prevent syphilis . . ."

"In recent years local authorities in many cities have compelled prostitutes to be photographed and fingerprinted and examined periodically for venereal disease. In some communities the authorities insisted that the prostitute visit certain physicians; in others the girls were permitted to choose their own doctors. In either case the police required prostitutes to have 'health certificates.' Thus in a large measure the authorities created a condition which led some ethical as well as many unethical practitioners to issue venereal disease certificates. With the better enforcement of state laws and local ordinances especially since the declaration of war, these practices have greatly diminished.

"Numerous devices are employed by prostitutes to deceive gullible men and boys with regard to the state of the prostitutes' health. This was shown by the American Social Hygiene Association in its investigation of prostitution conditions in 461 communities in 48 states during 1941. These studies show that some ethical private physicians, clinic directors and health officers are, unknown to them, being used to aid the prostitution racket. A few physicians are knowingly and for profit helping the racket by examining and certifying prostitutes.

"Clinic directors and health officers sometimes allow these women to gain possession of negative serological reports, clinic registration cards and food handlers' cards which they use in promotion of their illegal business. While the issuance of such a report or card to an individual is not in itself unethical or illegal, it is usually unwise and unnecessary in good medical and public health practices. It is but rarely desirable to give a patient a serological report, either positive or negative. The venereal disease clinic registration card should, for several good reasons, be a plain card bearing only the patient's clinic number, name and address. Food handlers' cards wherever used should be issued only to bona fide employees of food handling establishments and should bear only the name, address and date of examination of the food handler with no indication of freedom from infectious diseases.

SUMMARY

"It is suggested that each state should by law prohibit the issuance by physicians, health officers, or by anyone else, of certificates of freedom from venereal disease to any prostitute or to anyone for the purposes of prostitution; that physicians, health officers and clinic directors should take precautions to prevent prostitutes or others engaged in the prostitution racket from gaining possession of and making use of cards, reports or records for purposes of prostitution. This subject is considered worthy of the attention of medical societies, especially at present when prostitution and venereal diseases are serious problems for the armed forces and for war industries."

FUEL RATIONING AND THE PHYSICIAN

That physicians may be called upon for certification to rationing boards, where actual need exists, for supplemental fuel oil rations during the forthcoming period of restriction is indicated in an article on the subject published in the October 3 issue of the *Journal of the American Medical Association*. Supplemental fuel oil will be allowed to homes in which there are children under four years of age, where there are old people, where there is sickness or where there are other special situations. Under such circumstances sufficient fuel for a temperature of not less than seventy degrees will be permitted. Otherwise the recommended temperatures in homes and apartments probably will be set at approximately sixty-five degrees. Similar temperature requirements will prevail for schools, department stores and office buildings. Hospitals and sanatoriums, on the other hand, will be permitted a temperature of seventy degrees except in the operating rooms, which may be kept at eighty degrees. These temperatures represent the majority opinion of a special committee on the medical and health aspects of fuel rationing.

The committee states that "Health should not be jeopardized; any rationing plan adopted should be based on equality for all, with special consideration for those of tender or advanced age, or those with actual disease or lowered vitality. Any plan must be preceded and followed through by an intelligent and extensive educational program directed by some federal agency in Washington, with whatever medical or public health assistance or leadership may be required. Centralized medical or public health advisory relationships will be of great help with state and local groups as well as at the federal level. A suggested slogan based on a popular song of the first World War is 'Keep the Home Fires Burning—Low!'"

The method by which households in the thirty designated states in which fuel oil rationing has been placed in effect may obtain auxiliary rations is further explained in the October 10 issue of the *Journal of the American Medical Association*. The *Journal* summarizes the plan as follows:

"Illness, old age or infancy may make necessary auxiliary rationing of oil; consumers may obtain such auxiliary rations by applying to the local rationing board, accompanying the application with a certificate from a licensed physician. In supplying such a certificate the physician is to give the date, the name and the address of the householder. Furthermore, he must certify the nature of the illness, whether acute or chronic, whether or not it is of the type requiring higher indoor temperature, the approximate temperature required and

the approximate period for which the supplemental base heat is needed. The physician may at his discretion state the nature of the illness or may give additional information that will be helpful. The applicant himself files the certificate with the local rationing board. Furthermore, as a check, advisory committees are to be set up for each local rationing board. These advisory committees will include two licensed physicians and the county or local health officer. They will review cases in which certificates are questioned or in which a professional opinion is desired. Thus comes to the medical profession another call for its special services in wartime. Civilian physicians will no doubt do their utmost to aid in this work as another contribution to the war effort."

SALVAGING OLD MEDICAL INSTRUMENTS

Following the lead of the Iowa State Dental Society, the Iowa State Medical Society issued an appeal to its members for old medical instruments which might be salvaged to help the war effort. As this editorial is written, a week after sending the letter to all members, over one hundred contributions have been received. Others will undoubtedly be sent when physicians have had time to go through their supply of instruments and sort out those which are no longer used in daily practice.

The metal in these instruments is worth approximately ten times as much as ordinary scrap, and is very highly prized for its quality. Furthermore, many of the old instruments can be modernized or re forged and utilized in the many new hospitals which are being established. The present plan for handling the instruments which are received is to send them to the national headquarters for collecting old medical instruments. There they will be classified, repaired, remade, and distributed to the points where they are most needed. Many of them will go to base hospitals in the war zones.

From the present response, the JOURNAL believes the contribution from Iowa may well rank among the highest in the nation, and we know that the doctors who send in their instruments will be pleased to know that they will be used for such a good purpose.

Next month the JOURNAL will publish a list of the doctors who have contributed instruments in response to this request. It will undoubtedly be a long one, judging from the very gratifying results already obtained from the original letter. Iowa physicians will also be interested to know that because of the response here, a similar drive is being contemplated in other states. The need for the instruments is very great, and many of our fighting men, as well as those of our Allies, will receive the benefits of your generous gifts.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Executive Council Friday, October 9, 1942

The Executive Council of the Iowa State Medical Society met at Hotel Fort Des Moines in Des Moines, Friday, October 9, 1942, with the following persons present: Officers—Dr. F. P. Winkler, president; Dr. L. R. Woodward, president-elect; Dr. R. L Parker, secretary, and Dr. J. A. Downing, treasurer; from the Council—Drs. L. L. Carr, C. H. Cretzmeyer, J. B. Knipe, J. E. Reeder, J. C. Hill, H. A. Householder, C. A. Boice, R. C. Gutch, J. G. Macrae, and R. L. Barnett; from the Board of Trustees—Drs. O. J. Fay, J. I. Marker, and M. C. Hennessy; and Dr. R. D. Bernard of the Committee on Public Policy and Legislation.

The first matter for consideration was whether the Iowa State Medical Society should endorse and cooperate with the National Physicians' Committee. After a full discussion, it was voted that the State Society should endorse the National Physicians' Committee provided it would work through and in cooperation with our Committee on Public Policy and Legislation. A Committee of three was appointed to go to Chicago and inform the National Physicians' Committee of this vote and determine if it would cooperate under those conditions.

Dr. Bernard explained some of the legislation now pending in Washington; the 1943 annual meeting was discussed and the Executive Council voted to proceed with plans for a two-day meeting as proposed by the House of Delegates; the question of obtaining an enabling act for setting up prepayment medical care plans by county medical societies was considered and it was decided that no action should be taken during the war; a resolution offered by the optometrists in regard to prohibiting advertising of prices of lenses and eye glasses was approved; a resolution prepared by the embalmers that the office of coroner be restricted to doctors of medicine was endorsed; proposed legislation for compulsory vaccination by the Iowa Federation of Women's Clubs was endorsed; and the enforcement of the narcotic law was discussed.

Meeting adjourned at noon.

Meeting of the Board of Trustees Friday, October 9, 1942

The Board of Trustees of the Iowa State Medical Society met in the central office in Des Moines at 1:00 p.m., Friday, October 9, 1942. Those present were the three trustees, Drs. Fay, Marker and Hennessy; the president, Dr. Winkler; and secretary, Dr. Parker.

Minutes were read and approved; bills were authorized; participation in the salvage campaign through collection of old medical instruments was approved; and distribution of reprints of the editorial "It Would Help" to doctors sending in requests was recommended. Meeting adjourned at 1:30 p.m.

Roster of Physicians in Military Service

As of October 24, 1942

Adair County	Cedar County
Cornell, Dale D., Greenfield (Camp Murray, Washington) Gantz, Albert J., Greenfield (San Francisco, California)	Mosher, Martin L., West Branch (Camp Chaffee, Arkansas) O'Neal, Harold E., Tipton (Pine Camp, New York)
Adams County	Cerro Gordo County
Willett, Wilton J., Carbon (Fort Smith, Arkansas)	Adams, Carroll O., Mason City (Brigham City, Utah) Egloff, William C., Mason City (Santa Ana, California) Hale, Albert E., Dougherty Harris, Robert H., Mason City (Selfridge Field, Michigan) Harrison, Glenn E., Mason City (Boston, Massachusetts) Holman, David O., Mason City (Camp Grant, Illinois) Houlahan, Jay E., Mason City (Pendleton, Oregon) Lannon, James W., Clear Lake (Carlisle Barracks, Pennsylvania) Long, Draper L., Mason City (Santa Ana, California) Marinos, Harry G., Mason City (A.P.O., San Francisco, California) Sternhill, Irving, Mason City (A.P.O., New York, New York)
Allamakee County	Cherokee County
Hogan, Paul W., Waukon Ivens, Milton H., Waukon (Camp Shelby, Louisiana) Kiesau, Milton F., Postville (Fort Leonard Wood, Missouri) Rominger, Clark W., Waukon	Bullock, Grant D., Washta (Camp Livingston, Louisiana) Ihle, Charles W., Jr., Cleghorn (Fort Leonard Wood, Missouri) Noble, Rusl P., Cherokee (Sacramento, California) Swift, Charles F., Jr., Marcus (Fort Bliss, Texas)
Appanoose County	Chickasaw County
Edwards, Ralph E., Centerville Huston, Marshall D., Centerville (Denver, Colorado)	Caulfield, John D., New Hampton (Denver, Colorado) Murphy, Arlo L., Fredericksburg (Fort Clayton, Panama Canal Zone) O'Connor, Edwin C., New Hampton (Camp Crowder, Missouri) Richmond, Paul C., New Hampton (Fort Leonard Wood, Missouri)
Audubon County	Clarke County
Koehne, Frederick D., Audubon (Oroville, Washington)	Mikelson, Clarence J., Osceola
Benton County	Clay County
Koontz, Lyle W., Vinton Lewis, Leland S., Garrison Senfeld, Sidney, Belle Plaine	Adams, Glenn W., Royal (Fort Clayton, Panama Canal Zone) Edington, Frank D., Spencer (Scott Field, Illinois) Jones, Clare C., Spencer (San Diego, California) King, Dean H., Spencer (Spokane, Washington)
Black Hawk County	Clayton County
Bickley, Donald W., Waterloo (Fort Sam Houston, Texas) Bickley, John W., Waterloo (Fort Sam Houston, Texas) Butts, John H., Waterloo (Ames, Iowa) Cooper, Clark N., Waterloo (Mare Island, California) Ellison, Craig D., Waterloo (Great Lakes, Illinois) Hartman, Howard J., Waterloo Henderson, Lauren J., Cedar Falls (Fort Ord, California) Hoyle, Charles N., Cedar Falls (McClellan Field, Alabama) Ludwick, Arthur L., Waterloo (A.P.O., New York, New York) Paige, Robert T., La Porte City (Des Moines, Iowa) Rohlf, Edward L., Jr., Waterloo (Springfield, Missouri) Seibert, Cecil W., Waterloo (Salt Lake City, Utah) Smith, Eugene E., Waterloo (Scott Field, Illinois) Smith, Rex I., Waterloo (Salt Lake City, Utah) Smith, Rudolph G., Waterloo (A.P.O., New York, New York) Trunnell, Thomas L., Waterloo (Great Lakes, Illinois)	Anderson, Holger M., Strawberry Point (Omaha, Nebraska) Rhomberg, Edward B., Guttenberg (Fort Sam Houston, Texas)
Boone County	Clinton County
Brewster, Edward S., Boone (A.P.O., Los Angeles, California) Healy, Maurice D., Boone Shane, Robert S., Pilot Mound (Des Moines, Iowa)	Ellison, George M., Clinton Hill, Don E., Clinton King, Ross C., Clinton (Camp Chaffee, Arkansas) Meyer, Alfred K., Clinton (Denver, Colorado) Norment, John E., Clinton (Mare Island, California) Riedesel, Elmer V., Wheatland (Fort Douglas, Utah) Snyder, Dean C., De Witt Van Epps, Eugene F., Clinton Waggoner, Charles V., Clinton (Seattle, Washington)
Bremer County	Crawford County
Amlie, Paul J., Tripoli (Des Moines, Iowa) Osnes, Elias N., Readlyn (Vallejo, California) Rathe, Herbert W., Waverly (Springfield, Missouri)	Fee, Charles H., Denison (Bowman Field, Kentucky) Maire, Eugene J., Vail (San Francisco, California) Wetrich, Max F., Manilla
Buchanan County	Dallas-Guthrie Counties
Barton, John C., Independence (Omaha, Nebraska) Leehey, Paul J., Independence (Fort Ord, California)	Fnil, Charles S., Adel (Farragut Air Base, Idaho) Margolin, Julius M., Perry (Camp Chaffee, Arkansas) Nicol, Charles A., Panora (Camp Barkeley, Texas) Osborn, Clarence R., Dexter Wilke, Frank A., Woodward (A.P.O., New York, New York)
Buena Vista County	Decatur County
Almquist, Reuben E., Albert City (Camp Shelby, Mississippi) Brecher, Paul W., Storm Lake (Camp White, Oregon) Mailliard, Robert E., Storm Lake (Watertown, New York) Shope, Charles D., Storm Lake (Fort Des Moines, Iowa) Witte, Herbert J., Storm Lake (Fort Robinson, Nebraska)	Doss, William N., Leon (A.P.O., San Francisco, California) Gamet, Elmo E., Lamoni (Tacoma, Washington)
Butler County	Delaware County
Andersen, Bruce V., Greene (Kansas City, Missouri) James, Roger A., Allison (Mare Island, California) Rolfs, Floyd O., Parkersburg (Springfield, Missouri)	Baumgartner, Oscar, Earlvile (A.P.O., Los Angeles, California) Clark, Richard E., Manchester (Fort Riley, Kansas)
Calhoun County	Des Moines County
Faust, John H., Manson (San Diego, California) Grinley, Andrew V., Rockwell City (A.P.O., New York, New York) Hobart, Francis W., Lake City (Camp Grant, Illinois) Peek, Levin H., Lake City (Jefferson Barracks, Missouri) Stevenson, William W., Rockwell City (San Francisco, California) Weyer, Joseph J., Lohrville (Camp Carson, Colorado)	Heitzman, Paul O., Burlington (Fort Leonard Wood, Missouri) Jenkins, George D., Burlington (Fort Dix, New Jersey) Lohmann, Carl J., Burlington McKitterick, John C., Burlington (Navy Pier, Chicago, Illinois) Moerke, Robert F., Burlington (Fort Sam Houston, Texas)
Carroll County	Dickinson County
Anneberg, A. Reas, Carroll (Camp Barkeley, Texas) Anneberg, Walter A., Carroll Cochran, J. Lawrence, Carroll (Gulfport, Mississippi) Cross, Donald L., Coon Rapids Freedland, Maurice, Coon Rapids Morrison, John R., Carroll (Carlisle Barracks, Pennsylvania) Morrison, Roland B., Carroll (March Field, California) Pascoe, Paul L., Carroll (Bowman Field, Kentucky) Scannell, Raymond C., Carroll (Fort Leonard Wood, Missouri) Tindall, Robert N., Coon Rapids Wyatt, Merlin R., Manning (Carlisle Barracks, Pennsylvania)	Buchanan, John J., Milford (Great Lakes, Illinois) Henning, Garold G., Milford (Camp Pickett, Virginia) Rodawig, Don F., Spirit Lake (Fort Hancock, New Jersey)
Cass County	Dubuque County
Egbert, Daniel S., Atlantic (Fort Snelling, Minnesota) Longstreth, Clyde M., Atlantic Needles, Roscoe M., Atlantic (Camp Polk, Louisiana)	Beddoes, Morris G., Cascade (Omaha, Nebraska) Conzett, Donald C., Dubuque (Cedar Rapids, Iowa) Entringer, Albert J., Dubuque (Camp Murray, Washington) Hall, Carl B., Dubuque Knoll, Albert H., Dubuque

- Langford, William R., Epworth (Rapid City, South Dakota)
 Leik, Donald W., Dubuque (Las Vegas, Nevada)
 Mueller, John J., Dyersville
 Olson, Paul F., Dubuque (Bremerton, Washington)
 Paulus, James W., Dubuque
 Plankers, Arthur G., Dubuque (Fort Sill, Oklahoma)
 Quinn, Francis P., Dubuque (El Paso, Texas)
 Scharle, Theodore, Dubuque
 Schueller, Charles J., Dubuque (Camp Robinson, Arkansas)
 Sharpe, Donald C., Dubuque (Fort Leonard Wood, Missouri)
 Smith, Carl W., Dubuque (San Francisco, California)
 Steffens, Lincoln F., Dubuque (Fort Snelling, Minnesota)
 Ward, Donovan F., Dubuque (Mare Island, California)
- Emmet County**
 Clark, James P., Estherville (Fort Sam Houston, Texas)
 Collins, Loren E., Estherville
 Miller, Oscar H., Estherville (Gowen Field, Idaho)
- Fayette County**
 Belding, Leland, Waucoma
 Camp, Donald E., West Union
 Gallagher, John P., Oelwein (San Diego, California)
 Henderson, Walker B., Oelwein (Jefferson Barracks, Missouri)
 Hess, Ardo M., West Union
 Moen, Harry P., West Union (Denver, Colorado)
 Sulzbach, John, Oelwein
- Floyd County**
 Baltzell, Winston C., Charles City (Fort Sam Houston, Texas)
 Mackie, Donald G., Charles City
 Miner, James B., Jr., Charles City (San Diego, California)
 Toller, Hillard A., Charles City (Fort Cronkhite, California)
- Franklin County**
 Byers, Walter L., Sheffield
 Hedgecock, Lewis E., Hampton
 Walton, Seth G., Hampton (Camp Robinson, Arkansas)
- Fremont County**
 Kerr, W. Hawley, Hamburg
 Marrs, Walford D., Tabor (San Francisco, California)
 Wanamaker, A. Roy, Hamburg
- Greene County**
 Cartwright, Forrest P., Grand Junction (Casper, Wyoming)
 Castles, William A., Jr., Rippey (Fort Riley, Kansas)
 Hanson, Laurence C., Jefferson (Camp Grant, Illinois)
 Jongewaard, Albert J., Jefferson (Great Lakes, Illinois)
 Limberg, John I., Jr., Jefferson
 Lohr, Phillips E., Churdan
- Hamilton County**
 Buxton, Otho C., Webster City (March Field, California)
 Howar, Bruce F., Jewell (A.P.O., New York, New York)
 James, David W., Kamrar (Camp Livingston, Louisiana)
 Lewis, William B., Webster City (Camp Young, California)
 Mooney, Felix P., Jewell (A.P.O., New York, New York)
 Patterson, Roy A., Webster City (San Diego, California)
 Ptacek, Joseph L., Webster City (Sheppard Field, Texas)
- Hancock-Winnebago Counties**
 Dolmage, George H., Buffalo Center (Fort Sam Houston, Texas)
 Dulmes, Abraham H., Klemme (Camp Lewis, Washington)
 Eller, Lancelot W., Kanawha (Fort Leonard Wood, Missouri)
 Shaw, David F., Britt (Long Beach, California)
 Thomas, Clifford W., Forest City (Camp Crowder, Missouri)
- Hardin County**
 Houlihan, Francis W., Ackley (Fort Knox, Kentucky)
 Jansoniuk, John W., Eldora (Vancouver, Washington)
 Johnson, Robert J., Iowa Falls (Fort Bliss, Texas)
 Johnson, William A., Alden (Pendleton, Oregon)
 Shurts, John J., Eldora (Camp Roberts, California)
 Todd, V. Stanley, Eldora (Camp Robinson, Arkansas)
- Harrison County**
 Bergstrom, Albin C., Missouri Valley (Camp Robinson, Arkansas)
 Byrnes, Clemmet W., Dunlap (Jefferson Barracks, Missouri)
 Tamisiea, Francis X., Missouri Valley (Jefferson Barracks, Missouri)
- Henry County**
 Brown, Wayne B., Mount Pleasant (Springfield, Missouri)
 Gloeckler, Bernhard B., Mt. Pleasant (San Antonio, Texas)
 Hartley, Byron D., Mount Pleasant (Phoenix, Arizona)
 Megorden, William H., Mount Pleasant
 Ristine, Leonard P., Mount Pleasant (Sioux Falls, South Dakota)
- Howard County**
 Buresh, Abner, Lime Springs
- Humboldt County**
 Arent, Asa S., Humboldt (March Field, California)
 Coddington, James H., Humboldt
- Ida County**
 Dressler, John B., Ida Grove
 Martin, James W., Holstein (San Antonio, Texas)
- Iowa County**
 McDaniel, John D., Marengo (Fort Clark, Texas)
- Jackson County**
 Tijton, John J., Maquoketa
- Jasper County**
 Doake, Clarke, Newton
 Minkel, Roger M., Newton (A.P.O., New York, New York)
 Ritchey, Sterling J., Newton
- Jefferson County**
 Castell, John W., Fairfield (A.P.O., New York, New York)
 Gittler, Ludwig, Fairfield (A.P.O., New York, New York)
 Graber, Harold E., Fairfield (Camp Grant, Illinois)
 James, Lora D., Fairfield
 Taylor, Ingram C., Fairfield (Washington, D. C.)
- Johnson County**
 Adland, Samuel A., Iowa City
 Allen, James H., Iowa City
 Boiler, William F., Iowa City (Fort Leonard Wood, Missouri)
 Boyd, Eugene J., Iowa City (Camp Blanding, Florida)
 Brinkhus, Kenneth M., Iowa City (Fort Sam Houston, Texas)
 Cooper, Wayne K., Iowa City (Jefferson Barracks, Missouri)
 Crowell, Edwin A., Iowa City
 Diddle, Albert W., Iowa City (Key West, Florida)
 Elmquist, Homer S., Iowa City (San Diego, California)
 Emmons, Marcus B., Iowa City (Fort Sam Houston, Texas)
 Feller, Alto E., Iowa City (Camp Claiborne, Louisiana)
 Flynn, Joseph E., Iowa City (Hot Springs, Arkansas)
 Fourt, Arthur S., Iowa City (A.P.O., New York, New York)
 Francis, Norton L., Iowa City (Annapolis, Maryland)
 Galinsky, Leon J., Oakdale (Fort Logan, Colorado)
 Garlinghouse, Robert O., Iowa City (Fort Snelling, Minnesota)
 Gilliland, C. R., Iowa City (Great Lakes, Illinois)
 Hardin, Robert C., Iowa City (A.P.O., New York, New York)
 Harris, Karl S., Iowa City (Camp Crowder, Missouri)
 Irwin, Ralph L., Iowa City (Great Lakes, Illinois)
 January, Lewis E., Iowa City (Davis Field, Arizona)
 Keil, Phillip G., Iowa City
 Keislar, Henry D., Iowa City
 Longwell, Freeman H., Iowa City (Cumberland, Maryland)
 Nagyfy, Stephen F., Iowa City (Memphis, Tennessee)
 Newman, Robert W., Iowa City (Upper Darby, Pennsylvania)
 Paulus, Edward W., Iowa City (A.P.O., New York, New York)
 Petersen, Vernon W., Iowa City (A.P.O., New York, New York)
 Sells, Robert L., Jr., Iowa City (Hamilton Field, California)
 Skouge, O. T., Iowa City
 Smith, Harold F., Iowa City (Great Lakes, Illinois)
 Springer, Eugene W., Iowa City (Pontiac, Michigan)
 Stadler, Harold E., Iowa City (Fort Harrison, Indiana)
 Staggs, William A., Iowa City (Camp Robinson, Arkansas)
 Stump, Robert B., Iowa City (Fort Leonard Wood, Missouri)
 Titus, Elton L., Iowa City (Fort Wright, New York)
 Vest, William M., Iowa City (Fort Ord, California)
 Ziffren, Sidney E., Iowa City (Springfield, Missouri)
- Keokuk County**
 Bjork, Floyd, Keota
 Montgomery, Guy E., Keota (Fort Sam Houston, Texas)
 Wiley, Dudley, Hedrick (Mason City, Washington)
- Kossuth County**
 Clapsaddle, Dean W., Burt (Durham, North Carolina)
 Williams, Robert L., Lakota (San Diego, California)
- Lee County**
 Ashline, George H., Keokuk (Camp Young, California)
 Cleary, Hugh G., Fort Madison (Parsons, Kansas)
 Cooper, Raymond E., Keokuk (Fort Leonard Wood, Missouri)
 Johnstone, Alexander A., Keokuk (Camp Robinson, Arkansas)
 McKee, Thomas L., Keokuk (Camp Edwards, Massachusetts)
 Pumphrey, Loira C., Keokuk (Fort Leavenworth, Kansas)
 Rankin, John R., Keokuk (A.P.O., San Francisco, California)
 Steffey, Fred L., Keokuk (Fort Snelling, Minnesota)
 Van Werden, Benjamin D., Keokuk (Fort Jackson, South Carolina)
- Linn County**
 Andre, Gaylord R., Lisbon (Camp Barkley, Texas)
 Berney, Paul W., Cedar Rapids (San Francisco, California)
 Challed, Don S., Cedar Rapids (Fort Ord, California)
 Chapman, Robert M., Cedar Rapids
 Coughlan, Vernon H., Cedar Rapids (Fort Snelling, Minnesota)
 Courter, Willard O., Springville (Fort Warren, Wyoming)
 Dunn, Francis C., Cedar Rapids
 Halpin, Lawrence J., Cedar Rapids (Atlanta, Georgia)
 Hecker, John T., Cedar Rapids (Pecos, Texas)
 Jirsa, Harold O., Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Keith, John J., Marion
 Kruckenberg, William G., Mount Vernon (Elgin, Illinois)
 Locher, Robert C., Cedar Rapids
 MacDougal, Roderick F., Cedar Rapids
 McConkie, Edwin B., Cedar Rapids (Sioux Falls, South Dakota)
 McQuiston, J. Stuart, Cedar Rapids (Camp Carson, Colorado)
 Netolicky, Robert Y., Cedar Rapids (Mare Island, California)
 Noe, Carl A., Cedar Rapids (Hot Springs, Arkansas)
 Parke, John, Cedar Rapids (Carlisle Barracks, Pennsylvania)

- Proctor, Rothwell D., Cedar Rapids (Corpus Christi, Texas)
 Redmond, James J., Cedar Rapids (Camp Claiborne, Louisiana)
 Sedlacek, Leo B., Cedar Rapids
 Stark, Callistus H., Cedar Rapids
 Sulek, Arthur E., Cedar Rapids (Camp Shelby, Mississippi)
 Woodhouse, Keith W., Cedar Rapids
 Wray, Robert M., Cedar Rapids (A.P.O., San Francisco, California)
 Yavorsky, William D., Cedar Rapids (A.P.O., San Francisco, California)
- Louisa County
 DeYarman, Kyle T., Morning Sun
- Lucas County
 Lister, Kenneth E., Chariton (Fort Snelling, Minnesota)
- Lyon County
 Cook, Stuart H., Rock Rapids (Carlisle Barracks, Pennsylvania)
 Corcoran, Thomas E., Rock Rapids (A.P.O., New York, New York)
 Moriarty, John F., Rock Rapids (Fort Leonard Wood, Missouri)
- Madison County
 Boden, Harold N., Truro (Fresno, California)
 Chesnut, Paul F., Winterset
 Wicks, Ralph F., Winterset (Portland, Oregon)
 Veltman, John F., Winterset (St. Louis, Missouri)
- Mahaska County
 Bennett, Geoffrey W., Oskaloosa (Des Moines, Iowa)
 Lemon, Kenneth M., Oskaloosa (Rapid City, South Dakota)
- Marion County
 Elliott, Vance J., Knoxville (South Laguna, California)
 Mater, Dwight A., Knoxville (Scott Field, Illinois)
 Ralston, F. Paul, Knoxville
 Schiek, Charles M., Knoxville
 Schroeder, Mellgren C., Pella
 Williams, Donald B., Knoxville
- Marshall County
 Carpenter, Ralph C., Marshalltown (Vancouver, Washington)
 Marble, Edwin J., Marshalltown (San Diego, California)
 Marble, Willard P., Marshalltown (Walla Walla, Washington)
 Meyer, Milo G., Marshalltown (Camp Polk, Louisiana)
 Noonan, James J., Marshalltown (Fort Douglas, Utah)
 Phelps, Richard E., State Center (Camp Baker, California)
 Sinning, John J., Melbourne (Camp Robinson, Arkansas)
 Smith, Elmer M., State Center (Gowen Field, Idaho)
 Stegeman, James J., Marshalltown (Portland, Oregon)
 Wells, Rodney C., Marshalltown (Gowen Field, Idaho)
 Wolfe, Otis D., Marshalltown (Fort Riley, Kansas)
 Wolfe, Russell M., Marshalltown (Pensacola, Florida)
- Mills County
 DeYoung, Ward A., Glenwood (Omaha, Nebraska)
 Shonka, Thomas E., Malvern (Camp Russell, Texas)
- Mitchell County
 Culbertson, Robert A., St. Ansgar (Fort Des Moines, Iowa)
 Moore, Edson E., (Camp Pickett, Virginia)
 Walker, Thomas G., Riceville
- Monona County
 Almer, Lennart E., Moorehead (Fort Knox, Kentucky)
 Gaukel, Leo A., Onawa
 Harlan, Martin E., Onawa
 Stauch, Martin O., Whiting (Fort Rosicrans, California)
 Wainwright, Maxwell T., Mapleton (Camp Barkeley, Texas)
 Wolpert, Paul L., Onawa (Denver, Colorado)
- Monroe County
 Richter, Harold A., Albia
 Smith, Robert A., Albia (San Antonio, Texas)
- Montgomery County
 Bastron, Harold C., Red Oak (Pendleton, Oregon)
 Moriarty, Lauren R., Villisca (Camp Robinson, Arkansas)
- Muscatine County
 Ady, Albert E., West Liberty (A.P.O., San Francisco, California)
 Asthalter, Robert, Muscatine
 Carlson, Elmer H., Muscatine (Chicago, Illinois)
 Goad, Robley R., Muscatine (Hyattsville, Maryland)
 Kimball, John E., Jr., West Liberty (A.P.O., Miami, Florida)
 Lindley, Ellsworth, Muscatine
 Muhs, Emil O., Muscatine (Camp Robinson, Arkansas)
 Norem, Walter, Muscatine
 Sywassink, George A., Muscatine (Vancouver, Washington)
 Whitmer, Lyle H., Wilton Junction (Fort Sill, Oklahoma)
- O'Brien County
 Hayne, Willard W., Paullina (March Field, California)
 Moen, Stanley T., Hartley (Los Angeles, California)
 Myers, Kermit W., Sheldon (White Bear, Minnesota)
- Osceola County
 Kuntz, George S., Sibley (A.P.O., New York, New York)
- Page County
 Blackman, Nathan, Shenandoah
 Bossingham, Earl N., Clarinda (Camp Roberts, California)
 Burdick, Francis D., Shenandoah (Carlisle Barracks, Pennsylvania)
 Burnett, Francis K., Clarinda (Cheyenne, Wyoming)
 Little, Emmet B., Shenandoah
 Rausch, Gerald R., Clarinda (Wendover Field, Utah)
 Savage, Lester W., Shenandoah (Fort Meade, Maryland)
- Palo Alto County
 Davey, William P., Emmetsburg (San Diego, California)
- Plymouth County
 Foss, Robert H., Remsen (Fort Wright, Washington)
 Wolfson, Harold, Kingsley
- Pocahontas County
 Blair, Fred L., Jr., Fonda
 Herrick, Thomas G., Gilmore City
 Larson, John B., Laurens (Camp Barkeley, Texas)
 Leserman, Lester K., Rolfe (Camp Livingston, Louisiana)
- Polk County
 Abbott, Walter D., Des Moines (Oakland, California)
 Anderson, N. Boyd, Des Moines (Bowling Green, Virginia)
 Angell, Charles A., Des Moines (Camp Barkeley, Texas)
 Ansbach, Royal S., Mitchellville (MacDill Field, Florida)
 Barner, John L., Des Moines (Atlanta, Georgia)
 Barnes, Bernard C., Des Moines (Ogden, Utah)
 Bates, Maurice T., Des Moines (Washington, D. C.)
 Bender, Herman R., Des Moines (Carlisle Barracks, Pennsylvania)
 Bond, Thomas A., Des Moines (Bethesda, Maryland)
 Bone, Harold C., Des Moines (Santa Barbara, California)
 Brown, Addison W., Des Moines (Fort Leavenworth, Kansas)
 Bruner, Julian M., Des Moines (Fort Bliss, Texas)
 Bruns, Paul D., Des Moines (Carlisle Barracks, Pennsylvania)
 Burgeon, Floyd M., Des Moines (A.P.O., New York, New York)
 Caldwell, John W., Des Moines (Edmonton, Alberta, Canada)
 Chambers, James W., Des Moines (Omaha, Nebraska)
 Chase, William B., Jr., Des Moines (Seattle, Washington)
 Clark, George E., Jr., Des Moines (Salt Lake City, Utah)
 Connell, John R., Des Moines (A.P.O., New York, New York)
 Corn, Henry H., Des Moines (St. Louis, Missouri)
 Coughlan, Daniel W., Des Moines (Camp Robinson, Arkansas)
 Crowley, Fred A., Des Moines (Hot Springs, Arkansas)
 Crowley, Daniel F., Jr., Des Moines (A.P.O. New York, New York)
 DeCicco, Ralph, Des Moines (Oahu, Hawaii)
 Decker, Henry G., Des Moines (San Diego, California)
 Dushkin, Milton A., Des Moines (Fort Huachuca, Arizona)
 Elliott, Olin A., Des Moines (Santa Ana, California)
 Ellis, Howard G., Des Moines (Salt Lake City, Utah)
 Ervin, Lindsay J., Des Moines (Fort Clark, Texas)
 Fried, David, Des Moines (Carlisle Barracks, Pennsylvania)
 George, Everett M., Des Moines
 Gerchek, E. W., Des Moines
 Goldberg, Louie, Des Moines (Palm Springs, California)
 Gordon, Arnold M., Des Moines (Camp Barkeley, Texas)
 Graeber, Frederick O., Des Moines (Aberdeen, South Dakota)
 Greek, Lewis M., Des Moines (Camp Crowder, Missouri)
 Gurau, Henry H., Des Moines (Portland, Oregon)
 Haines, Diedrich J., Des Moines (Denver, Colorado)
 Harris, D. Dale, Des Moines (A.P.O., San Francisco, California)
 Harris, Hubert L., Des Moines
 Hess, John, Jr., Des Moines (Carlisle Barracks, Pennsylvania)
 James, Audra D., Des Moines (Great Lakes, Illinois)
 Johnston, C. Harlan, Des Moines (Augusta, Georgia)
 Kast, Donald H., Des Moines (Fort Stevens, Oregon)
 Kelly, Dennis H., Des Moines (Denver, Colorado)
 Kelley, Edmund J., Des Moines (Treasure Island, California)
 Klocksiem, Harold L., Des Moines
 Kottke, Elmer E., Des Moines (Temple, Texas)
 Landis, Sylvan N., Des Moines (West Palm Beach, Florida)
 La Tona, Salvatore, Des Moines (Carlisle Barracks, Pennsylvania)
 Lederman, James, Des Moines
 Lehman, Emery W., Des Moines (Vancouver, Washington)
 Lovejoy, E. Parish, Des Moines (Mare Island, California)
 Maloney, Paul J., Des Moines (Fort Lewis, Washington)
 Marquis, George S., Des Moines (Great Lakes, Illinois)
 Martin, Lowell E., Des Moines
 Mauritz, Emory L., Des Moines (Camp Gruber, Oklahoma)
 McCoy, Harold J., Des Moines (Iowa City, Iowa)
 McDonald, Donald J., Des Moines (March Field, California)
 McNamee, Jesse H., Des Moines (Seattle, Washington)
 Mencher, E. W., Des Moines
 Merkel, Byron M., Des Moines (Galveston, Texas)
 Morden, R. Paul, Des Moines (March Field, California)
 Murphy, James H., Des Moines (San Diego, California)
 Nelson, Arnold L., Des Moines (Fort Sam Houston, Texas)
 Noun, Louis J., Des Moines (Great Lakes, Illinois)
 Nourse, Myron H., Des Moines (Bethesda, Maryland)
 Patton, Bernard W., Des Moines (Camp Robinson, Arkansas)
 Pearlman, Lee R., Des Moines (Fort Ord, California)
 Peisen, Conan J., Des Moines (Fort Perry, Ohio)
 Penn, Eugene C., West Des Moines (Spokane, Washington)
 Pfeiffer, Eric P., Des Moines (Springfield, Missouri)
 Phillips, Allan B., Des Moines (Corpus Christi, Texas)
 Porter, Robert J., Des Moines (Salt Lake City, Utah)
 Powell, Lester D., Des Moines (San Diego, California)

- Pratt, Elmer B., Des Moines (Fredericksburg, Virginia)
 Priestley, Joseph B., Des Moines (Camp Carson, Colorado)
 Purdy, William O., Des Moines (Camp Livingston, Louisiana)
 Riegelman, Ralph H., Des Moines (Randolph Field, Texas)
 Rotkow, Maurice J., Des Moines (El Paso, Texas)
 Schaeferle, Martin J., Des Moines (Carlisle Barracks, Pennsylvania)
 Schlaser, Vernon L., Des Moines (Great Lakes, Illinois)
 Shepherd, Lloyd K., Des Moines (A.P.O., New York, New York)
 Shiffler, H. Kirby, Des Moines (A.P.O., New York, New York)
 Singer, Paul L., Des Moines (Camp Grant, Illinois)
 Skultety, James, Des Moines (Staten Island, New York)
 Smead, Howard H., Des Moines (Wichita Falls, Texas)
 Smith, Herman J., Des Moines (San Diego, California)
 Smith, Roland T., Des Moines
 Snodgrass, Ralph W., Des Moines (Fort Rosecrans, California)
 Snyder, Glen E., Grimes (Camp Robinson, Arkansas)
 Sohm, Herbert H., Des Moines (San Diego, California)
 Springer, Floyd A., Des Moines (San Francisco, California)
 Stearns, A. Bryce, Des Moines (Denver, Colorado)
 Stickler, Robert, Des Moines (Fort Benning, Georgia)
 Stitt, Paul L., Des Moines (Great Lakes, Illinois)
 Throckmorton, J. Fred, Des Moines (Camp Barkeley, Texas)
 Toubes, Abraham A., Des Moines (Greenville, Mississippi)
 Turner, Howard V., Des Moines (Hot Springs, Arkansas)
 Updegraff, Thomas, Des Moines (Spokane, Washington)
 Vaubel, Ellis K., Des Moines (Vancouver, Washington)
 Wagner, Eugene C., Des Moines (Washington, D. C.)
 Willett, Wendell M., Des Moines (Fort Bragg, North Carolina)
 Zarchy, Alex Z., Des Moines (Camp Cook, California)
- Pottawattamie County
 Beaumont, Fred H., Council Bluffs (A.P.O., New York, New York)
 Cogley, J. Phillip, Council Bluffs (Camp Shelby, Mississippi)
 Collins, Robert M., Council Bluffs (San Diego, California)
 Dean, Abbott M., Council Bluffs (Pensacola, Florida)
 Hennessy, J. Donald, Council Bluffs (Chicago, Illinois)
 Howard, Lloyd G., Council Bluffs (El Paso, Texas)
 Hungerford, W. E., Avoca
 Jensen, Arnold L., Council Bluffs (A. P. O., San Francisco, California)
 Kurth, Clarence J., Council Bluffs (Omaha, Nebraska)
 Lembert, Edwin M., Council Bluffs (Omaha, Nebraska)
 Maiden, Sydner D., Council Bluffs (San Francisco, California)
 Martin, Lee R., Council Bluffs (A.P.O., Los Angeles, California)
 Sternhill, Isaac, Council Bluffs (Fort Warren, Wyoming)
 Tinley, Robert E., Council Bluffs (A.P.O., New York, New York)
 Treynor, Jack V., Council Bluffs (South Bend, Indiana)
 Wieseler, R. J., Avoca (McChord Field, Washington)
 Wurl, Otto A., Council Bluffs (Camp Claiborne, Louisiana)
- Poweshiek County
 Brobyn, Thomas E., Grinnell (San Jose, California)
 Hickerson, Luther C., Brooklyn (Oxnard, California)
 Niemann, Theodore V., Brooklyn (Camp Shelby, Mississippi)
 Parish, John R., Grinnell (San Francisco, California)
- Ringold County
 Seaman, Charles L., Mount Ayr (Van Buren, Arkansas)
- Sac County
 Bassett, George H., Sac City (San Diego, California)
 Deters, Donald C., Schaller (A.P.O., New York, New York)
 Evans, William L., Sac City (Camp Hood, Texas)
 Klocksiem, Roy G., Odebolt (A.P.O., San Francisco, California)
 Neu, Harold N., Sac City (Jefferson Barracks, Missouri)
- Scott County
 Balzer, Walter J., Davenport (Fort Douglas, Utah)
 Bishop, James F., Davenport (A.P.O., Seattle, Washington)
 Block, Lawrence A., Davenport
 Boden, Worthy C., Davenport (Biloxi, Mississippi)
 Brown, Douglas H., Davenport
 Brown, Merle J., Davenport (Pando, Colorado)
 Carey, Edward T., Davenport
 Christiansen, Charles C., Dixon (A.P.O., San Francisco, California)
 Evans, Harold J., Davenport
 Gibson, Preston E., Davenport (Palm Springs, California)
 Hurevitz, Hyman M., Davenport (Denver, Colorado)
 Kimberly, Lester W., Davenport
 LaDaze, Leo H., Davenport (Camp Campbell, Kentucky)
 Lorfeld, Gerhart W., Davenport (San Antonio, Texas)
 Marker, John I., Davenport (Omaha, Nebraska)
 McMeans, Thomas W., Davenport (A.P.O., New York, New York)
 Neufeld, Robert J., Davenport
 Shafer, Arthur W., Davenport (Camp Bowie, Texas)
 Sheeler, Ivan H., Davenport (Omaha, Nebraska)
 Sorenson, Aral C., Davenport (Mare Island, California)
 Sunderbruch, John H., Davenport (Camp Maxey, Pennsylvania)
 Weinberg, Harry B., Davenport (Fort Benning, Georgia)
 Zukerman, Cecil M., Bettendorf
- Sioux County
 Glysteen, Rodney R., Alton (A.P.O., San Francisco, California)
 Larson, Marvin O., Hawarden (Camp Robinson, Arkansas)
- Story County
 Conner, John D., Nevada (Camp Robinson, Arkansas)
 Lekwa, Alfred H., Story City (San Diego, California)
 McFarland, Julian E., Ames (Farragut Air Base, Idaho)
 Rosebrook, Lee E., Ames (Knobnoster, Missouri)
 Sperow, Wendell B., Nevada (San Diego, California)
 Thorburn, Orval L., Ames (Las Vegas, Nevada)
- Tama County
 Boller, Galen C., Traer (Fort Leonard Wood, Missouri)
 Dobias, Stephen G., Chelsea (Fort Greeley, Alaska)
 Havlik, Al. J., Tama (A.P.O., San Francisco, California)
 Roberts, Charles R., Dysart (San Diego, California)
 Schaeferle, Lawrence G., Gladbrook (Fort Leonard Wood, Missouri)
 Standefer, Joe M., Tama (San Diego, California)
- Taylor County
 Hardin, John F., Bedford (Fort Wood, Missouri)
- Union County
 Ryan, Cyril J., Creston (Salt Lake City, Utah)
- Wapello County
 Brentan, Emanuel, Ottumwa (Moline, Illinois)
 Brody, Sidney, Ottumwa
 Hughes, Robert O., Ottumwa (San Diego, California)
 Nelson, Frederick L., Jr., Ottumwa
 Prewitt, Leland H., Ottumwa
 Selman, Ralph J., Ottumwa (El Paso, Texas)
 Struble, Gilbert C., Ottumwa (Fort Harrison, Indiana)
 Whitehouse, William N., Ottumwa
- Warren County
 Fullgrabe, Emil A., Indianola (Bethesda, Maryland)
 Shaw, Ernest E., Indianola (Fort Sam Houston, Texas)
 Trueblood, Claire A., Indianola (Camp Campbell, Kentucky)
- Washington County
 Boice, Clyde L., Washington (Pensacola, Florida)
 Droz, A. Keith, Washington (Groese Ile, Michigan)
 Mast, Truman M., Washington (Sioux Falls, South Dakota)
 Stutsman, Robert, Washington
 Ware, Stephen C., Kalona (Ft. Meade, Maryland)
- Wayne County
 Hyatt, Charles N., Jr., Humeston
- Webster County
 Baker, Charles J., Fort Dodge (Camp Claiborne, Louisiana)
 Burch, Earl S., Dayton (Camp Livingston, Louisiana)
 Coughlan, Charles H., Fort Dodge (Jefferson Barracks, Missouri)
 Joyner, Nevill M., Fort Dodge (Brooklyn Field, Alabama)
 Larsen, Harold T., Fort Dodge (Newport, Rhode Island)
 Shrader, John C., Fort Dodge (Camp Young, California)
 Thatcher, Orville D., Fort Dodge (Kelly Field, Texas)
 Thatcher, Wilbur C., Fort Dodge
 Van Patten, E. Martin, Fort Dodge
- Winnesieck County
 Fritch, Arthur F., Decorah (Oahu, Hawaii)
 Hospodarsky, Leonard J., Ridgeway (McChord Field, Washington)
 Larson, Lester E., Decorah
 Van Besien, George J., Decorah (Fort Leavenworth, Kansas)
- Woodbury County
 Bettler, Philip L., Sioux City
 Blackstone, Martin A., Sioux City
 Carney, Samuel D., Sioux City (Pomona, California)
 Cmeye, Patrick M., Sioux City (A.P.O., San Francisco, California)
 Crowder, Roy E., Sioux City (San Diego, California)
 Dimsdale, Lewis J., Sioux City
 Donohoe, Edmund S., Sioux City
 Elson, Veryl J., Danbury (A.P.O., Seattle, Washington)
 Frank, Louis J., Sioux City (Mare Island, California)
 Grossman, Milton, Sioux City (Hobbs, New Mexico)
 Honke, Edward W., Sioux City
 Knott, Robert C., Sioux City
 Krigsten, William M., Sioux City (Springfield, Missouri)
 Lande, Jacob N., Sioux City (Whalley, England)
 Mattic, Lloyd H., Danbury (Camp Livingston, Louisiana)
 Mugan, Robert C., Sioux City (Gowen Field, Idaho)
 Osincup, Paul W., Sioux City
 Rarick, Ivan H., Sioux City (Soquel, California)
 Reeder, James E., Jr., Sioux City
 Ryan, Martin J., Sioux City
 Schwartz, John W., Sioux City
 Tracy, John F., Sioux City
 Wilson, Leo L., Sioux City
- Worth County
 Osten, Burdette H., Northwood
 Westley, Gabriel S., Manly (Camp Forrest, Tennessee)
- Wright County
 Aageson, Carl A., Dows
 Doles, Emmet A., Clarion (Phoenix, Arizona)
 Missildine, Whitney H., Eagle Grove (A.P.O., San Francisco, California)

SPEAKERS BUREAU ACTIVITIES

NEW RADIO ANNOUNCEMENT

At the request of the Speakers Bureau the Iowa Department of Public Safety is furnishing short "spot announcements" for our weekly radio broadcasts over WOI at Ames and WSUI at Iowa City. We believe these constant reminders will be effective in making the public realize the necessity for careful driving. Many lives could be saved and much suffering alleviated if more caution were instituted on the highway. These avoidable accidents are destructive not only because people are killed and wounded but also because the time and energy of the attending physician is needlessly exhausted. We greatly appreciate and are indebted to the public safety department for their help in combatting these unnecessary hazards.

Announcements pertaining to smallpox and diphtheria are also included in our radio programs. Through these educational broadcasts the Speakers Bureau has publicized for several years the need for immunization against these dreaded communicable

diseases. We must not relent in our fight, and this is one of the best means of keeping people conscious of the smallpox and diphtheria menace.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

November 2-4 Preventing Diphtheria and Smallpox

John M. Hayek, M.D.

November 9-11 The Value of Good Vision

Jay C. Decker, M.D.

November 16-18 Nephritis

Robert J. Nelson, M.D.

November 23-25 Public School Health

Charlotte Fisk, M.D.

POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF NOVEMBER

Marshalltown Hotel Tallcorn 6:30 p. m.	November 3	Peripheral Vascular Disease Walter F. Kvale, M.D., Rochester
Ottumwa Hotel Ottumwa 6:30 p. m.	November 3	Management of Heart Failure George C. Lee, M.D., Kansas City
Sheldon Arlington Hotel 6:30 p. m.	November 10	The Treatment of Wounds Lewis M. Overton, M.D., Des Moines
Ottumwa Hotel Ottumwa 6:30 p. m.	November 17	Proctology in General Practice Raymond J. Jackman, M.D., Rochester
Garwin U. B. Church 6:30 p. m.	November 19	Recent Developments in Obstetrics Everett D. Plass, M.D., Iowa City
Sheldon Arlington Hotel 6:30 p. m.	November 24	Treatment of the More Common Diseases of the Skin John A. Borghoff, M.D., Omaha
Iowa Falls Princess Cafe 6:30 p. m.	November 24	X-ray Diagnosis James V. Prouty, M.D., Cedar Rapids

SCIENTIFIC RECORDING SCHEDULED FOR THE MONTH OF NOVEMBER

Wayne County Medical Society Corydon, 8:00 p. m.	November 10	Diseases of the Gallbladder R. Russell Best, M.D., Omaha
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WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee, Dexter, Iowa*

President—MRS. F. W. MULSOW, Cedar Rapids

President Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

INVEST IN A NURSE

Six months have passed since our Nurses Student Loan Fund was approved at our state convention. During this time many auxiliaries have not had meetings and their members have been busy with various defense activities. But, do not forget, we have a defense job of our own which is most important to the war effort.

When the second front comes, there will be a great need for well trained nurses. This means that our hospital training schools must be filled to capacity with student nurses and that graduates must be released for active duty. Several organizations are loaning money to girls to assist them in starting their training; our fund is designed to help them later when financial worries often come. No girl should be forced to discontinue her training if for any reason family resources fail her.

To date donations have been received from the following county auxiliaries: Dallas-Guthrie, \$24.00; Polk, \$25.00; and Cass, \$5.00. During the summer ladies of the Polk County Auxiliary earned \$31.25 for the fund by having a bridge party; and two of the members made \$4.25 at a bridge tea. This, together with fifteen personal gifts of from one to five dollars, gives us a worthwhile start. Many thanks to each and every donor.

Please make this fund your big project this year. Each auxiliary should have a Nurses Loan Chairman to promote its interest and to make its donation grow. Devote at least a part of your meeting to the responsibilities of nurses in war times. If you have a nurse in your town who was in the last war, call upon her to speak. Create a broader knowledge of what you are working for by posters, articles in your newspaper and by talking about it in any lay group of which you are a member. If you have any project to earn money, do not limit it to doctors' wives; your community should be interested, too. Always include the nurses in your county, because they want to help you whenever it is possible for them to do so.

Invest your funds in a nurse, it pays big dividends!

Mrs. W. R. Hornaday, Chairman

HYGEIA CONTEST

The Auxiliary *Hygeia* Contest opened September 1, 1942, and will close January 31, 1943, which leaves three months for each group to work. All county

auxiliaries affiliated with the Iowa State Medical Society are eligible to participate.

Cash prizes totaling \$400 will be awarded to the auxiliary securing the largest number of subscription credits to *Hygeia* during the contest period.

If your auxiliary has not yet sent in your quota or the number of paid-up members as of the last fiscal year, do so at once.

Each *Hygeia* chairman should remember to keep her receipts so they can be checked with the subscription department.

During December and January subscriptions to *Hygeia* may be accepted from physicians at half price, \$1.25. Physicians may give as many subscriptions as they choose.

Mrs. Ivan K. Sayre, *Hygeia* Chairman

Polk County Auxiliary Serves the USO

Members of the Polk County Auxiliary have served as hostesses at the USO in Des Moines on the first and third Wednesdays of each month since last April. Ten members furnish the refreshments and four serve them. Usually two hundred and fifty inductees, soldiers and sailors are served each time.

Mrs. R. C. Doolittle

Montgomery County

The Montgomery County Medical Society and its Auxiliary held a joint dinner at Hotel Johnson in Red Oak the evening of September 8 with sixteen members in attendance. Dr. Leland J. Belding, from the office of District Health Unit No. 11 in Council Bluffs, gave a very interesting talk on public health and stressed particularly such diseases as syphilis, tuberculosis and cancer. He was accompanied by Miss Johnson, district health nurse, who spoke on her problems and duties.

Mrs. Harold C. Bastron, a former member of the Auxiliary, has returned to Red Oak to make her home for the duration. Her husband, Major H. C. Bastron, is now stationed at the United States Army Air Base Hospital in Pendleton, Oregon.

Mrs. W. S. Reiley

BOOK NOTES

Keep Them Human by C. M. Dixon is a book for parents and teachers which analyzes the fundamental requirements and attitude of children at home and at play. Imaginative guidance in creative living will

help instill a normal set of values based on affection instead of misunderstanding and hate.

The Franklin Institute in Philadelphia has prepared a group of brief papers on various fields of knowledge in which Benjamin Franklin was interested and has placed particular emphasis on some of his original contributions. We pass on to you some highly interesting excerpts from the paper on Benjamin Franklin's Associations in the Field of Medicine:

"Medicine, although one of the least known of Franklin's varied fields, was one of his chief interests. In 1751 he promoted the founding of the Pennsylvania Hospital. In 1771 he was elected a member of the Royal Medical Society of Paris and in 1784 was appointed one of the commissioners to investigate the theories of Mesmer. (He was largely instrumental in exposing Mesmer as a fraud.) In 1787 the Medical Society of London honored Franklin with an appointment as honorary member.

"Among Franklin's most intimate companions and most valued correspondents were outstanding medical men of the day. Constant correspondence took place with Dr. Jan Ingenhousz of Vienna, court physician to Maria Theresa and Joseph II. Since Franklin had issued 'plain instructions' for parents to inoculate their children and had distributed pamphlets containing an account of the success of inoculations for smallpox, Ingenhousz sought his advice before inoculating the young princes of the imperial family.

"Quacks are the greatest liars in the world, except their patients", was a just statement, according to Franklin, who felt that few quacks ever made money by physic and that no bill drawn upon the credulity of the people of London by quacks was ever protested . . .

"Franklin held many views on matters of hygiene and treatment of diseases that were ahead of his generation. When there were no bathtubs in American homes, and the general custom was to bathe but seldom, he was an advocate of frequent bathing . . . He was the first to discover the poisonous quality which repeated respiration imparts to the air and was the originator of the modern science of air ventilation. He called attention to the folly of excluding air from hospitals and sick rooms and preached the gospel of pure air and ventilation while everyone else slept with bedroom windows tightly closed . . .

"Some of his recommendations for diet and health are explained by Poor Richard—'To lengthen thy life, lessen thy meals; dine with little, sup with less, do better still, sleep supperless; eat few suppers and you'll need few medicines.' That great danger lay in over-eating rather than in under-eating was his constant warning.

"In the field of public health, Franklin made an observation on lead poisoning. His letters on this subject are classics in literature. In one letter, he expresses the belief that lead poisoning among typesetters was due to the particles of metal swallowed with their food by slovenly workers who ate their meals without washing their hands.

"The observations made by Franklin on the cause

and cure of the common cold are still today the fundamental knowledge that we have on that subject . . . 'How contracted—by over-eating; by constipation; by coming in close contact with a person having a cold. How treated—warming; exercise; perspiration; quinine taken early. How prevented—temperate eating and drinking; warm clothing in winter; proper elimination; free sweating; avoiding contact with infected persons.' Franklin suggested that colds are contracted from the 'effluvium' transmitted from people in a hot crowded room. In his time the term 'germ' was unknown. Today medical science calls this same effluvium or germ, 'virus,' which means the same thing."

Mrs. K. M. Chapler

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

November 2-4 Preventing Diphtheria and Smallpox

John M. Hayek, M.D.

November 9-11 The Value of Good Vision

Jay C. Decker, M.D.

November 16-18 Nephritis

Robert J. Nelson, M.D.

November 23-25 Public School Health

Charlotte Fisk, M.D.

OUR NATIONAL PUBLICATION

The first three issues of the *Bulletin* will contain programs and suggestions by national chairmen for local Auxiliaries, as well as material of interest to every member of the Auxiliary.

Send in the following subscription blank today. Be an interested and informed member.

Mrs. H. I. McPherrin, Bulletin Chairman

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Woman's Auxiliary to the American Medical Association

Please send me the **BULLETIN** for one year, for which I am enclosing one dollar.

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Please check:

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SOCIETY PROCEEDINGS

Des Moines County

The Des Moines County Medical Society held its opening meeting of the fall season in Burlington Tuesday, September 22, at Hotel Burlington. The guest speaker of the evening was William D. Paul, M.D., of the State University of Iowa College of Medicine at Iowa City, who spoke on Gastrology.

Johnson County

The regular meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday, October 7, with the following program: Harry R. Jenkinson, M.D., spoke on Defense and First Aid Protection in War Gases, and Ray E. Trussell, M.D., discussed the paper.

A. L. Sahs, M.D., Secretary

Mitchell County

The Mitchell County Medical Society was entertained by Drs. John O. and Merrill O. Eiel of Osage at a dinner Tuesday, October 13, honoring Dr. Thomas G. Walker of Riceville, who has been commissioned lieutenant, senior grade, in the United States Navy. Following dinner a regular business meeting of the society was held.

Pottawattamie County

The Pottawattamie County Medical Society held its last regular meeting for the duration of the war at Hotel Chieftain in Council Bluffs Tuesday noon, September 29. It was voted that all regularly scheduled meetings should be discontinued for the duration; however, necessary business meetings will be called by the president from time to time. It was also proposed to request all retired physicians in the county to resume their work because of the present shortage of doctors in this territory.

Scott County

The Scott County Medical Society held its regular monthly meeting Tuesday, October 6, at the Lend-A-Hand Club in Davenport. Everett D. Plass, M.D., of the State University of Iowa College of Medicine at Iowa City, was the guest speaker of the evening and presented a discussion on Trichomonas Vaginitis.

Henry A. Meyers, M.D., Acting Secretary

Washington County

The Washington County Medical Society held its September meeting at the nurses' home in Washingt-

ton Tuesday, September 22. The scientific program for the evening was a round table discussion on The Sulfonamide Drugs and Their Uses. Following this Dr. Enos D. Miller of Wellman spoke briefly complimenting Dr. Nimrod J. Lease of Crawfordsville on having practiced medicine for fifty years, and Dr. Charles W. McLaughlin of Washington presented Dr. Lease with a fountain pen as a token of esteem from the society.

Iowa Medical Women's Association

The Iowa Medical Women's Association met at the home of Rosabell A. Butterfield, M.D., in Indianola Sunday afternoon, October 11. Plans to further the work of the medical and surgical relief committee of America were outlined by Dr. Butterfield.

Iowa and Illinois Central District Medical Association

The Iowa and Illinois Central District Medical Association held its opening meeting of the fall season at the LeClaire Hotel in Moline, Illinois, Thursday, September 17, with the following program: Earl C. Padgett, M.D., Professor of Clinical Surgery at the University of Kansas School of Medicine, presented The Treatment of Burns. Walter E. Foley, M.D., Davenport, and Louis C. Arp, M.D., Moline, discussed the paper. George W. Koivun, M.D., Moline, spoke briefly on Cesarean Section.

PERSONAL MENTION

Dr. Herbert W. Anderson of Lenox and Dr. Charles W. Edmonds of Bedford have located in Onawa and have announced their association in the general practice of medicine.

Dr. E. E. Stutsman of Washington spoke before the staff of the Jefferson County Hospital in Fairfield at its noon luncheon meeting Tuesday, September 29. He gave an interesting report on the civilian defense work in Washington County.

Dr. George W. Cusick, who has practiced in Princeton for the past twenty years, has located in Davenport where he will continue the general practice of medicine.

Dr. Joe G. Fellows of Ames spoke before the Lions

Club of that city at its noon luncheon meeting Thursday, October 1. He discussed the importance of good nutrition and health in wartime.

Dr. William E. Walsh of Hawkeye has opened an office in West Union and will divide his time between the two offices. In West Union Dr. Walsh is taking over the practice of Dr. Ardo M. Hess who is now in military service.

Dr. Howard F. Turner, head surgeon at the Iowa Soldiers Home in Marshalltown for the past five years, has accepted a position in the Curtiss-Wright Airplane Factory in St. Louis. Dr. Louis L. Bowie, formerly an assistant at the State Hospital in Woodward, has been appointed to succeed Dr. Turner as head surgeon of the Iowa Soldiers Home.

Dr. Walter E. Anthony of Ottumwa addressed the Kiwanis Club of Oskaloosa at its noon luncheon meeting Monday, September 28. Dr. Anthony chose for his subject Medicine, Its Past and Future.

Dr. Fred L. Blair, Sr., formerly of Fonda, has moved to Tulsa, Oklahoma, where he has accepted a position with the Spartan Aircraft Corporation.

Dr. Milford E. Barnes of Iowa City spoke before the Iowa City Woman's Club at its meeting Friday afternoon, October 16. He talked on Public Welfare.

Dr. Leslie A. Carlson, who has practiced in Fayette for the past three years, has located in Oelwein where he has taken over the practice of Dr. John P. Gallagher. Dr. Gallagher is now in military service.

Dr. William A. Johnson has become associated in the practice of medicine with Dr. Edward F. Beeh of Fort Dodge. Dr. Johnson, who was formerly a member of the Sac County Medical Society, came to Fort Dodge from Laurel, Nebraska, where he has practiced for the past year. Dr. Johnson was graduated in 1939 from the University of Nebraska College of Medicine.

Dr. Temple M. Miller of Muscatine discussed Sulphonamide Drugs before the Y Men's Club of that city at its dinner meeting Tuesday evening, October 13, at the Y. M. C. A.

Dr. Edwin Cobb, formerly of Marshalltown, has announced the opening of an office for the practice of ophthalmology and otolaryngology in Hollywood, California.

MARRIAGES

Miss Frances L. Geil, daughter of Mr. and Mrs. Arthur A. Geil of Des Moines, and Dr. James Fred Throckmorton, formerly of Des Moines, were married Saturday, September 19, at the First Methodist Church in Abilene, Texas. Dr. Throckmorton is now a Captain in the Army of the United States and is stationed at Camp Howze in Gainesville, Texas.

DEATH NOTICES

Donnelly, William LeRoy, of Davenport, aged forty-nine, died October 13 following a short illness. He was graduated in 1919 from the State University of Iowa College of Medicine, Iowa City, and at the time of his death was a member of the Scott County Medical Society.

Kennedy, Edward Matthias, of New Hampton, aged thirty-six, died October 4 after an extended illness. He was graduated in 1931 from the State University of Iowa College of Medicine, Iowa City, and at the time of his death was a member of the Chickasaw County Medical Society.

Maxwell, George Bancroft, of Davenport, aged seventy-eight, died October 14 after a brief illness. He was graduated in 1888 from Rush Medical College, University of Chicago, and at the time of his death was a member of the Scott County Medical Society.

Peck, John Hyren, of Oakdale, aged sixty-three, died suddenly October 18 after a heart attack. He was graduated in 1909 from the State University of Iowa College of Medicine, Iowa City, and at the time of his death was a member of the Johnson County Medical Society. A complete obituary will be found in the History of Medicine Section of this issue of the JOURNAL.

IT WOULD HELP!

Several requests were received for reprints of the editorial, "It Would Help," which appeared in the October issue of the Journal, and the Board of Trustees authorized the expenditure necessary for an adequate supply. Physicians desiring copies of the reprint may have them by writing the Journal of the Iowa State Medical Society, 505 Bankers Trust Building, Des Moines, Iowa.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. PAUL E. GARDNER, New Hampton

DR. JOHN T. MCCLINTOCK, Iowa City

DR. HENRY G. LANGWORTHY, Dubuque

DR. WALTER L. BIERRING, Des Moines

John Hyren Peck, M.D.

1879-1942

An Appreciation

One of the most precious gifts which can come to a person is the friendship of an individual who is made of better and nobler "stuff" than himself. John Peck's friendship was such a gift to me. Now he is gone. He dropped in his harness the way he always said he wanted to go. To us who are left his departure was a blow, because we enjoyed him so much for what he was, and knew he had so much more to give to his family, his friends and his community.

John Hyren Peck was the first doctor I met in Iowa. I can see now the keen, quizzical eyes which he fastened on me as he sought to size up his new colleague. During thirty years, the Glomsets saw much of the Pecks, but I do not believe that any of the Pecks realized how welcome they were at our place. But, it was during the years when in sunshine and moonlight, in rain and snow, John and I crossed and recrossed the state of Iowa that I had the opportunity to look beyond John Peck's exterior, and to scrutinize the nucleus of his existence. I believe he would like to have me tell you, his friends, about the man whom I learned to know during those rides over the Iowa prairies.

Two characteristics dominated John's soul, the love of his family and the master passion which drove him through life and whose slave he was during all the time I knew him. John was not a demonstrative man. I believe that not even his wife realized at all times what his family actually meant to him. There are souls, little ones and big ones, who cannot express their own feelings toward their kin, their country, or their God. John Peck belonged to that class. But on countless occasions I have seen his eyes light up in gratitude and happiness as someone from the outside recognized the sterling qualities in his folk. The passion which obviously dominated John's life

from the day I met him to the day he died, was his intense desire to eradicate tuberculosis. Other men have given their lives to fight the great white plague, but none have given more wholeheartedly or more entirely his all than did John Peck. I verily believe that John would have lied or stolen if by so doing he could have wrested one victim from the talons of the dreaded disease. He constantly searched the scientific journals for new material useful in the diagnosis, the prevention, or the treatment of tuberculosis. As he came to realize that the disease could be mastered only by making everyone tuberculosis conscious and by making the practicing physicians in Iowa far more competent in their handling of the disease than they were, nothing in the world—business, family, or health—was permitted to stand in the way of delivering a blow against this disease. I never knew him to refuse to talk to any lay group about tuberculosis if it were at all possible for him to do so. I have driven across the entire state of Iowa again and again with him, worked a whole day and an evening demonstrating to a half dozen physicians how to diagnose and treat tuberculosis and then return home during the early hours of the morning. Again and again he repeated the "gospel" of the essentials for the diagnosis of tuberculosis.

John had another passion. Really it was a corollary to the first one. He wanted to be a friend to every decent physician in the state of Iowa. He succeeded better than any other man I have known. I doubt if it was generally realized that he spent hours and hours learning not only the last name, but also the first name, of every doctor in the state. I have seen literally thousands of smiles light up the faces of the doctors as John would extend his hand to them and address each by his first name. Only he and I knew how many miles

we drove out of our way to greet a sick colleague, and only the visited doctor who clasped Peck's hand knew what this deed meant to him.

John is gone, but is he? There are thousands of healthy people living in this state now who have John Peck to thank for the fact that they are among the living. Tens of thousands of Iowa citizens, the potential victims of this disease, will never know that they have him to thank for their health. Thousands of Iowa doctors, too, are better doctors and happier men because John Peck lived among them.

Daniel J. Glomset, M.D.

OBITUARY

John Hyren Peck was born in 1879; was graduated in 1909 from the State University of Iowa College of Medicine; was Professor of Medicine at Drake University College of Medicine from

1910 to 1913; and went to Oakdale Sanatorium as Superintendent in November, 1936. During the World War he was in the tuberculosis service of the army with the commission of major in the medical corps. He was president of the Iowa Tuberculosis Association from 1918 to 1934; president of the National Tuberculosis Association in 1933; president of the American College of Chest Physicians in 1940; president of the Polk County Medical Society in 1919; and president of the Iowa State Medical Society in 1930. He also served as president of the Mississippi Valley Conference on Tuberculosis and was a delegate in 1932 to the International Union Against Tuberculosis at The Hague. At the time of his death he was a member of the Johnson County and Iowa State Medical Societies, the American College of Chest Physicians and the American College of Physicians.

Medical History of Franklin County

WILLIAM R. ARTHUR, M.D., Hampton, Iowa

(Continued from last month)

Latimer—Present population 416.

Dr. Thom was the first doctor to practice in Latimer. He was here in 1880, and no further account of his activities could be found.

Dr. L. E. Barton was recorded as the next physician to locate in Latimer. Records reveal he was here in 1886 but contain no further information.

Dr. G. W. Appleby, a native of Illinois, was born August 25, 1860. He located in Latimer in 1887, remained one year and moved to Belmond, Iowa. He practiced there a year and then moved to Bristow, Iowa, where he remained until his retirement in 1935. He is now living in Steven's Point, Wisconsin.

Dr. G. L. Stalford located here in 1895 and remained until 1902, when he sold his practice to Dr. J. H. VanVorhis and moved to Los Angeles, California.

Dr. N. C. J. Stensgaard, a native of Denmark and a graduate of the Keokuk Medical College in 1894, came to Latimer in 1898.

Dr. J. H. VanVorhis, a native of Wisconsin who was graduated in 1901 from the Northwestern University Medical School in Chicago, came to Latimer in 1902 and bought the practice of Dr. G. L. Stalford. Dr. VanVorhis practiced there until 1912 when he sold his practice to Dr. John F. Martin. Dr. VanVorhis moved to California and has since died.

Dr. John Franklin Martin was born in Iowa Falls, Iowa, June 26, 1887. He was graduated in 1912 from the University of Illinois College of

Medicine in Chicago. He came to Latimer at once where he bought the practice of Dr. J. H. VanVorhis. Dr. Martin has enjoyed a good practice and has had many honors bestowed upon him. He is a former member of the board of education in Latimer, a former mayor, leader of the Latimer band, county coroner for several years and a staff member of Lutheran Hospital in Hampton, Iowa. Dr. Martin usually goes to Canada in the late fall and never comes home without a moose. Then all the doctors of Franklin and Wright counties are his guests either in Clarion or Hampton, and that is the last of that moose's career. Since hunting is becoming a little difficult for the doctor, he has now built himself a nice lodge on the banks of Beeds Lake and expects to devote considerable time to angling for large fish.

Sheffield—Present population 1,060.

The first physician to locate in Sheffield was Dr. Mosley Canfield, who came from Marshalltown in 1873. He practiced homeopathy, and when or from which school he graduated is not known. He practiced in Sheffield until his death in July, 1879. He was buried in Sheffield.

Dr. J. M. Potter of the eclectic school came from Faribault, Minnesota, and located in Sheffield in 1875. He was a native of New York and took his medical training in Cincinnati, Ohio. He moved from Sheffield to a small town in Dallas County, Iowa, in 1881.

Dr. W. R. Hoveheld practiced in Sheffield only a short time, after his arrival there in 1881.

Dr. H. R. Floyd was a native of Canada and was graduated in 1878 from Keokuk Medical College. In October, 1882, he located in Sheffield. He had practiced at Solon, Tiffin, and Hampton, Iowa, before coming to Sheffield. He remained in Sheffield until 1886.

Dr. G. W. Lee was born in 1847 and located in Sheffield in 1882, coming from Wisconsin. He is credited as being a graduate of the University of Michigan Medical School at Ann Arbor. He died in 1924 and was buried in Sheffield.

Dr. C. J. Allen was born in New York in 1856 and was graduated in 1887 from Rush Medical College. He located in Sheffield that same year and continued his practice here until his death on August 31, 1917. He was buried in the Sheffield Cemetery.

Dr. Ada S. Dailey practiced in Sheffield from 1890 to 1897. Her name appeared on death certificates filed during that period. She was buried in Sheffield.

Dr. E. L. Goss, a native of Illinois who was graduated in 1892 from the College of Physicians and Surgeons in Chicago. He located in Sheffield the same year.

Dr. H. C. Hunter was born September 26, 1863, in Butler, Iowa. He was graduated in 1902 from the New York University College of Medicine. He located that same year in Sheffield, where he practiced until 1907. He then moved to Milford, Utah, where he was surgeon for the Union Pacific Railroad Company. He practiced there until his death April 17, 1929.

Dr. Frederick S. Schwab, a native of Iowa, was graduated in 1906 from Drake University College of Medicine at Des Moines. He located in Sheffield that same year.

Dr. J. L. Collins, a native of Iowa, was graduated in 1909 from the St. Louis College of Physicians and Surgeons. He located in Sheffield the same year and practiced until 1918 when he went into military service for three years. After he was discharged from the army in 1921, he moved to Turlock, California, where he practiced until his death early in 1941.

Dr. Roy N. Reuber, a native of Canada, was graduated in 1919 from Loyola University School of Medicine in Chicago. He located in Sheffield in February, 1922, and in August, 1930, moved to Mason City, Iowa, where he is now in practice.

Dr. F. H. Rodemeyer, a native of Franklin County, Iowa, was born March 14, 1876. He was graduated in 1904 from the University of Illinois College of Medicine and practiced medicine in Alexander, Iowa, from 1914 to 1918. In June, 1918, he entered the United States Army and was discharged in February, 1919. He immediately

began practicing medicine in Sheffield, where he is still in practice.

Dr. Jessie B. Hudson, a native of Franklin County, Iowa, was born March 4, 1870. She was graduated in 1908 from the State University of Iowa College of Medicine. She practiced medicine in Sheffield from 1927 to 1936. She moved to Hampton early in 1941 and at present is practicing medicine and running an antique shop.

Dr. J. M. Cadwallader, a native of Missouri, was graduated in 1907 from the State University of Iowa College of Medicine at Iowa City. He located in Sheffield in 1931 and practiced here until his death May 23, 1936. He was buried in Washington, Iowa.

Dr. Ira A. Marble, a native of Michigan, was graduated in 1907 from the University of Michigan Medical School. He located in Sheffield in 1937, where he is still practicing.

Dr. Walter L. Byers, a native of Iowa, was born in 1910, and was graduated in 1938 from the State University of Iowa College of Medicine at Iowa City. He came to Sheffield in August, 1939, and practiced here until October 1, 1940, when he was called into the army.

Chapin—Present population 150.

Dr. W. F. Cooper was born in Medina County, Ohio, September 19, 1845. He studied medicine in Ohio. He located in Chapin in July, 1881, and practiced here for many years. He was buried in Old Chapin Cemetery.

Dr. J. S. Hurd, a native of Maine, practiced here for many years. He was a good doctor and was well educated, but he was a great believer in Spirits of Frumenti, which at times got the better of him. He was buried in Old Chapin Cemetery.

Dr. H. P. Roberts was born in Sussex County, New Jersey, December 1, 1828. He was graduated in 1857 from Western Reserve University School of Medicine at Cleveland, Ohio. He located on a farm four miles north of Hampton in June, 1876. His calls became so frequent that he decided to locate in Hampton in the spring of 1882. He practiced in Hampton a few years and later moved to Chapin where he practiced many years. He died December 6, 1901, and was buried in Wayside Cemetery just south of Chapin.

A Dr. Parsons located in Chapin about 1898 and remained but a short time.

Dr. Harry Cragin came to Chapin about 1902, remained two years and then moved to Alexander, Iowa.

Dr. Viers located in Chapin in 1903 and remained about one year. It is understood that at that time he was appointed to a medical post in the United States Navy.

(To be continued next month)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT**—By Augustus Thorndike, M.D., associate in surgery, Harvard Medical School. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$3.00.
- DERMATOLOGIC THERAPY IN GENERAL PRACTICE**—By Marion B. Sulzberger, M.D., assistant clinical professor of dermatology and syphilology, New York Postgraduate Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.
- ELECTROTHERAPY AND LIGHT THERAPY**—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$8.00.
- THE 1941 YEAR BOOK OF PHYSICAL THERAPY**—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.
- SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES**—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.
- THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY**—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.
- SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY**—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.
- SYNOPSIS OF ALLERGY**—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.
- A TEXTBOOK OF NEURO-ANATOMY**—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.
- ENCEPHALITIS: A CLINICAL STUDY**—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.
- PEDIATRIC GYNECOLOGY**—By Goodrich C. Schaufler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.
- LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES**—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.
- THE STORY OF CLINICAL PULMONARY TUBERCULOSIS**—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.
- OCCUPATIONAL DISEASES**—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.
- VAGINAL HYSTERECTOMY**—By James W. Kennedy, M.D., surgeon-in-chief to the Joseph Price Hospital, Philadelphia; and Archibald D. Campbell, M.D., assistant professor of obstetrics and gynecology, McGill University. F. A. Davis Company, Philadelphia, 1942. Price, \$10.00.

BOOK REVIEWS

THE MANAGEMENT OF FRACTURES, DISLOCATIONS AND SPRAINS

By John Albert Key, M.D., clinical professor of orthopedic surgery, Washington University School of Medicine; and H. Earle Conwell, M.D., Birmingham, Alabama. Third edition. The C. V. Mosby Company, St. Louis, 1942.

The third edition of this book is equally as good if not better than the two preceding editions. This edition covers the subject of fractures in an excellent manner and is a book which can be recommended to any man repairing a few fractures a year or to a man repairing a lot of fractures or specializing in bone work. The book is divided into two parts.

Chapter one of the first part deals with a general consideration of fractures, fracture equipment, plaster technic and classifications of fractures. The second chapter of this first part covers the repair of fractures stressing tendencies which cause nonunion or delayed union. The third chapter presents methods of obtaining reduction and after-care, such as physiotherapy in the treatment of injuries of bones into and around the joints. First aid in fractures and automobile injuries, particularly in regard to examination and emergency treatment and the emergency splinting of fractures, is given consideration in the fourth chapter. The following chapter takes up the complications of fractures, such as injuries to the overlying soft parts, infection, injuries to muscles, blood vessels, nerves, tendons, traumatic arthritis following fractures, malunion, pressure

sores and bed sores. Pathologic fractures, compound fractures and war wounds are also given consideration. Dislocations are discussed in detail. The last two chapters discuss the way in which the Workmen's Compensation Law affects fracture cases and also the medicolegal aspects of fracture cases.

The second part of this book considers the various fractures individually and discusses them in detail. There are seventeen chapters which discuss in an excellent manner each individual fracture, its complications and its problems with regard to after-care. The book on the whole is a superior text on the care of all types of fractures and dislocations.

D. C. W.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS

A brief, simple, accurate financial record for the physician's desk. Colwell Publishing Company, Champaign, Illinois, 1942. Price, \$6.00.

This excellent volume holds a position which few other books attain in that it continues to meet the needs of the physician for a simple and accurate financial record.

Physicians who have not yet acquainted themselves with the Daily Log will find the answer to many of their bookkeeping problems in this useful and comprehensive volume. One of the most valuable features is the business summary sheet which is included at the end of each month. Running totals may be carried from month to month so that at the end of the year the compilation of income tax returns

will be comparatively simple. Special sections are provided for an obstetric waiting list, notifiable diseases, deaths, narcotic records and social security data.

The busy general practitioner who desires a simple and accurate accounting system will find this combination appointment book and bookkeeping record most valuable. We highly recommend its use to those of our readers who have not yet used this compact financial record.

L. F. H.

TREATMENT IN GENERAL PRACTICE

By Harry Beckman, M.D., professor of pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Fourth edition, thoroughly revised. W. B. Saunders Company, Philadelphia, 1942. Price, \$10.00.

This text, which is already accepted and popular among the profession, has been thoroughly and completely revised. The author has made every attempt to present the subject of therapeutics in an interesting and constructive manner. The discussion of the treatment of each disease is preceded by a short resumé of the clinical findings, cardinal symptoms, and in some instances the historical background peculiar to each condition. The treatment of many rare and unusual conditions has been omitted.

The subject material has been well classified into sections, such as those presenting the treatment of infectious diseases, allergic disturbances, deficiency diseases, endocrine disturbances, the anemias, circulatory disturbances, and diseases of the nervous system and skin. Throughout the text the use of the sulfonamide drugs is adequately discussed; and the last section presents a general discussion of the toxicity of these compounds.

This is an excellent well-organized and well-written text which should be in the hands of every physician.

A. W. B.

MANAGEMENT OF THE SICK INFANT AND CHILD

By Langley Porter, M.D., dean emeritus, University of California Medical School; and William E. Carter, M.D., Director of University of California Hospital. Sixth edition. The C. V. Mosby Company, St. Louis, 1942. Price, \$11.50.

The sixth edition of "Management of the Sick Infant and Child" by Porter and Carter is a concise pediatric textbook of particular value to the general practitioner.

This book is organized into several sections. The first section deals with common symptoms such as vomiting, diarrhea, constipation, convulsions, fever and cough. The next division presents symptoms and diseases by systems. The final section on methods is a serviceable guide to the general practitioner. Detailed instructions are given for the administration of parenteral fluids, immunization procedures and local medications. This division is well illustrated, and many of the illustrations would be helpful in demonstrating to parents methods of nursing

care which could be carried out in the home. Dietary instructions for the normal infant, the older child, the malnourished, the obese, the allergic and the epileptic child are included. The drugs commonly used in pediatrics are well outlined. C. F.

ENDOCRINOLOGY: CLINICAL APPLICATION AND TREATMENT

By August A. Werner, M.D., assistant professor of internal medicine, St. Louis University School of Medicine. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$10.00.

In this text the author has accumulated all the important normal and abnormal physiology of the ductless glands known to the present time. He describes the various physical types which result from endocrine disorders and the way in which to recognize them in practice. He warns against the use of the varied glandular preparations, since so many of them are inert.

In reading the volume, one becomes impressed with the complexity of the subject and our great limitation in knowledge, as well as our lack of definite treatment. It will be of assistance in diagnosing endocrine disturbances and syndromes. E. E. K.

PERSONALITY AND MENTAL ILLNESS

By John Bowlby, M.D., psychiatrist, London Child Guidance Clinic. Emerson Books, New York, 1942. Price, \$2.75.

Beginning with an analysis and critical discussion of previous work on personality by Kretschmer, Jung and others, Dr. Bowlby proceeds with his own elaborate classification of the same material. By associating traits with neurotic, prepsychotic and psychotic conditions, he builds up a method of psychiatric classification, diagnosis and prognosis using personality traits rather than symptoms as criteria. A lengthy list and description of traits found in schizoid and syntonic personalities is given, and illustrative cases showing the relation of traits to the associated psychoses are cited in substantiation of the author's contentions.

Special emphasis is given to several basic points: (1) The neuroses are different in degree only from the functional psychoses; that is, the difference is quantitative rather than qualitative. (2) Pure personality types are rare. (3) Syntones are not always frank and open and schizoids are not always the reverse. (4) These contrasting types do not correspond with the original intent of the terms extrovert and introvert. (5) Many syntonic traits may appear in schizoids but the reverse does not occur. (6) Frequent shifts from neurosis to psychosis are observed.

This book offers an informative and clarifying discussion of a confused situation and gives much food for thought. It will be useful to psychiatrists, psychologists and others seeking refinement of their knowledge of personality and its application as an aid in diagnosis and understanding of many psychiatric problems.

R. C. D.

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THE MANAGEMENT OF STRABISMUS*

OSCAR B. NUGENT, M.D., Chicago, Illinois

The treatment of strabismus can be classified into two branches, surgical and nonsurgical. In the last ten years some noteworthy advancements have been made in surgery for the correction of strabismus, but the most beneficial improvement in its management has been in the nonsurgical method of treatment. In about 50 per cent of the cases, however, it is necessary to use both methods. Some of the nonsurgical procedures are refraction under the cycloplegic method and the prescribing of lenses, daily occlusions of the fixing eye, and orthoptics. The type of procedure depends greatly upon the age of the patient at the time treatment is first begun and the particular type of deviation present. In a certain percentage of cases nonsurgical treatment is sufficient to produce the desired results, while in other instances nonsurgical treatment is of no value.

An attempt will be made in this paper to classify the cases of strabismus according to the age of the patients for the purpose of giving a generalized system of treatment which may be applied to each age group. The author wishes to make it clear that this attempt at grouping according to age is not to be taken as a definite procedure for each and every patient, because each patient is a specific problem and must always be considered individually.

Group I—Patients from one to six years of age, inclusive. Method of treatment: (a) correction of error of refraction under the cycloplegic method; (b) daily occlusion of the functioning eye; (c) special attention to possible vitamin deficiencies; and (d) in some patients five and six years of age, orthoptics can be used.

Group II—Patients from seven to fifteen years of age. Method of treatment: (a) correction of error of refraction under the cycloplegic method; (b) daily occlusion of the functioning eye; (c) orthoptics; (d) surgery if proper results have not

been obtained by orthoptics; and (e) following surgery orthoptics should be continued in an attempt to establish postsurgical readjustment and promote better muscular coordination.

Group III—Patients from fifteen to thirty years of age. Method of treatment: (a) correction of error of refraction under the cycloplegic method; (b) orthoptics in some cases; (c) surgery; and (d) postoperative orthoptics.

Group IV—Patients thirty years of age and beyond. Method of treatment: (a) correction of error of refraction by careful manifestation or cycloplegic method, and (b) surgery. Functional

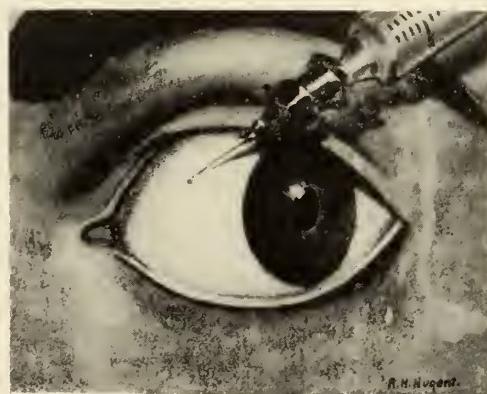


Fig. 1. One or two minimis of 2 per cent novocain solution injected above and below muscle attachment.

training is of doubtful value in many patients in this age group.

In the early age group, good results are to be expected from the nonsurgical treatment. This should be followed until the patient has gained depth perception, if possible. If depth perception cannot be attained within a year of vigorous training, then one must be satisfied with first or second degree of fusion. In short, one should build up the highest degree of fusion within a reasonable length of time, using prisms to assist in bringing the images to each fovea before surgery is considered.

A system of treatment with slight modification

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.



Fig. 2. Vertical incision in conjunctiva ten millimeters long over muscle attachment.

to suit the individual case, which can generally be applied to patients in the latter years of Group I and in the earlier years of Group II, follows: First, refraction under the atropine cycloplegic method, prescribing full correction. This in a small percentage of the cases will produce binocular single vision and will be adequate treatment. Second, in all other instances orthoptics should be started as soon as the patient is old enough to cooperate with the orthoptic technician. The patient should be given daily training periods of not less than three periods per week, working constantly to the point of procuring normal retinal correspondence affected either with or without the use of prisms. Third, after orthoptic training has been carried on from six to eight months (depending upon the individual case) and proper results have not yet been obtained, one should resort to surgical intervention. Following this, orthoptic training should again be given.

Occlusion of the fixing eye at regular daily intervals and the use of atropine in the fixing eye over periods of several weeks are important procedures in the nonsurgical treatment. A patch or

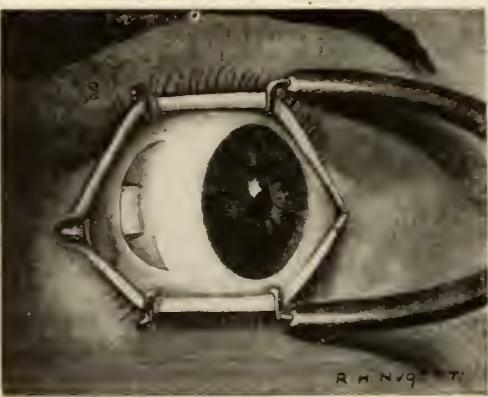


Fig. 3. Tenon's capsule is opened and slit back above and below muscle tendon.

an opaque shield over the fixing eye two or three hours daily will force the use of the deviating eye and rapidly develop the visual acuity or retard or stop the progress of amblyopia ex anopsia.

According to Good,¹ lacquer placed on the lens covering the fixing eye in place of the shield or patch or atropine has definite advantages: distance and near vision are equally affected; there are no allergic reactions; the objectionable appearance of a dilated pupil is avoided; and the amount of obscuration of sight can be controlled by the application of the lacquer. The advantages over the patch are that binocular vision is stimulated rather than suppressed; lacquered lenses are worn all the time, which is important in the treatment of amblyopia; and the field of vision is unimpaired, which today is very important as a safety factor for all children who cross streets. Lacquer brushed on a lens obscures vision to 20/40. If a

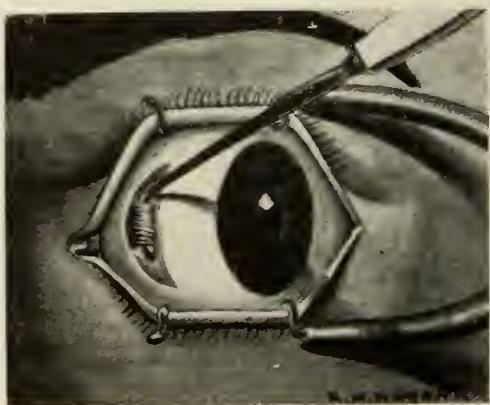


Fig. 4. Muscle picked up with strabismus hook.

stippling motion of the brush is used as the lacquer dries, the vision can be reduced to 20/100; if more obstruction is desirable, a patch should be used.

Approximately 50 per cent of all cases of strabismus can be remedied by correction of errors of refraction, occlusion, atropine and orthoptic training.² Dunphy³ reported a series of twenty-nine cases of strabismus treated with orthoptics and gave the following results: There was improvement in 65 per cent of the patients, and only 24 per cent received a complete cure.

Vorisek⁴ reported his findings in cases of strabismus treated with atropine, occlusion, and correction of errors of refraction as follows: Fifty-two per cent of 183 monocular patients made a complete recovery; and of 62 patients with alternating squint, the vision in only 23 per cent became straight.

The operative procedure used in the surgical correction of strabismus should be decided upon

by the surgeon's past experiences. There are several operative technics described in the current literature and textbooks, any one of which is sufficient in the hands of the experienced surgeon. The beginner should familiarize himself with a surgical technic which has been standardized and follow the author's description to the letter, never deviating from or changing any part of the technic

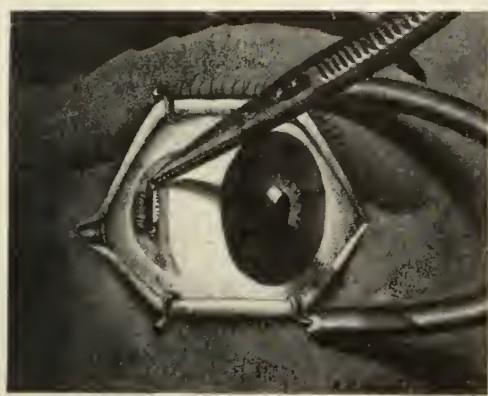


Fig. 5. Muscle clamp applied and tendon cut.

until he has become sufficiently proficient to know from experience that such a change is a definite improvement over the original.

Curdy⁵ advocated the equal advancement and recession of the opposing muscles in the correction of horizontal strabismus in order to prevent undue tension on the sutures during the operation and the period of healing. Bielschowsky⁶ preferred a recession with a suture placed through the muscle tendon and through the stump of the tendon on the globe, which he was able to adjust later if necessary. This carries out the same principle as the operation to be described in this paper. Lavery⁷ corrected vertical strabismus as much as 20 per cent by using a recession on the inferior rectus.

In the event of alternating convergent squint, either one of two methods may be followed: Recess the internal rectus of the non-squinting eye and, if necessary, perform a resection on the external rectus of the same eye; or perform a recession on each of the internal recti muscles.

For the patient with a concomitant convergent squint, it is my practice to recess the internal rectus of the squinting eye and do a Worth's advancement of the external rectus of the same eye, if the convergence is twenty-five degrees or more and if a recession on the internal rectus will not produce at least five degrees of overcorrection.

In the case of a divergent squint, a recession of the external rectus only of the squinting eye is performed if the squint is not over twenty degrees and if an overcorrection can be obtained. If

the squint is more than twenty degrees and if an overcorrection cannot be obtained by a recession on the external rectus, then there should also be an advancement operation on the internal rectus of the same eye.

It is best not to expect more than twenty degrees of correction by the recession of a single external rectus for fear of weakening the extenuus to the extent that homonymous diplopia may occur when looking toward the side on which the operation was performed.

The method used by the author is a recession with a control suture and one which has been devised partly from experimentation and partly copied from other technics described in the literature. It has been used by the author for fifteen years and has proved valuable. It can be employed in any of the various forms of strabismus or ocular deviations where a recession is indicated. It has also been employed in the various forms of extreme phorias.

TECHNIC OF RECESSION WITH CONTROL SUTURE

The anesthesia is local; a sedative, such as barbital or nembutal, is given one hour before surgery is begun. After the patient is on the operating table, instillations of a one-half per cent solution of pontocaine hydrochloride are made in the conjunctival sac of the eye upon which the operation is to be performed. These instillations are made every four minutes for four times, following each instillation with a 1:1000 solution of adrenalin chloride. Two subconjunctival injections of two or three drops of a two per cent solution

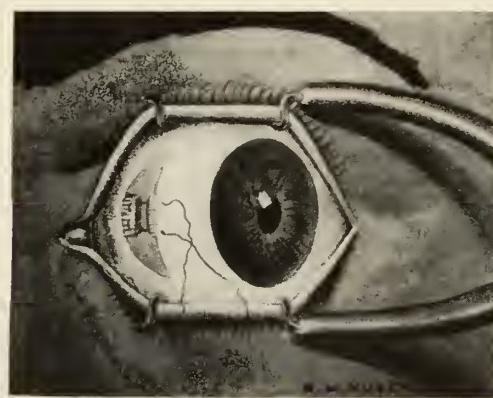


Fig. 6. Control suture in place.

of novocain are made, one just above and the other just below the attachment of the tendon of the muscle to be recessed (Figure 1). Another deeper injection of a four per cent solution of novocain is made in or near the belly of the muscle. This is usually all the anesthesia necessary to in-

sure a painless operation. However, if the patient is a nervous type, a far more complete local anesthesia can be obtained by an injection in the muscle cone in order to block the ciliary ganglion.

Scrubbing: During the time required for the instillation of the local anesthesia, the face is thoroughly scrubbed with soap and water and dried with a sterile towel.

Irrigation: After the speculum is in place, the conjunctival sac is irrigated with a 1:5000 solution of mercuric chloride. The excess irrigating solution is then sponged out of the conjunctival sac and the operating cloth is placed over the face.

Incision: A vertical incision ten millimeters in length is made in the conjunctiva (Figure 2) with an iris scissors. The incision is made just over the point of attachment of the muscle into the globe. The conjunctiva is then dissected from the muscle and capsule for a distance of about five millimeters. The Tenon's capsule is grasped with a mouse-tooth forceps directly above the incision of the muscle and opened with the iris scissors. The capsule is slit for a distance of about five millimeters along the edge of the muscle. This same procedure is carried out along the lower border of the muscle (Figure 3).

Clamping the Muscle: The muscle is picked up on a strabismus hook (Figure 4) and the muscle clamp is adjusted to the muscle. The muscle is then cut loose from the globe with an iris scissors (Figure 5).

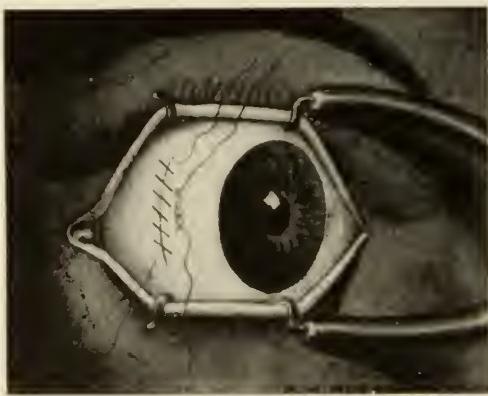


Fig. 7. Surgeon's knot in control suture and conjunctiva closed with running suture untied.

Placing of Control Suture: For the control suture a No. 4 double-armed silk thread is used and is placed through the muscle tendon in such a manner as to tend to hold the muscle flat against the sclera. To accomplish this, the suture is carried through the muscle by placing one needle through the muscle from the scleral side, entering behind the clamp at the junction of the upper and

middle third and passing through the extreme upper edge of the tendon from the conjunctival side back to the scleral side. The other needle is passed behind the clamp through the tendon from the scleral side at the junction of the lower and middle third and then passed back through the extreme lower border of the muscle tendon from the conjunctival side. This brings the two ends of the suture out under the muscle, one at the top and the other at the lower border. The two ends of the suture are passed through the stump of the tendon on the globe and through the capsule and conjunctiva, one at the extreme upper end and the other at the lower end of the tendon stump (Figure 6). The cut edges of the conjunctiva are carefully brought together by means of a running untied silk suture, No. 000000 (Figure 7).

The eyes are inspected at this time for their relative positions one with the other, using the corneal reflex from the light of an electric ophthalmoscope. If there is an overcorrection of five degrees or more, and the original deviation was not more than twenty-five degrees for a convergent or twenty degrees for a divergent squint, it will not be necessary to do any further surgery. If, however, there is still an undercorrection or an overcorrection of less than five degrees, or if the original deviation is more than twenty-five degrees for a convergent or more than twenty degrees for a divergent squint, then it is advisable to shorten the opposing muscle or perform another recession on the corresponding muscle of the opposite eye, which is sometimes done in alternating squint. The author generally uses the advancement operation described by Worth. It is always necessary to produce an overcorrection.

At this stage of the operation it is necessary to adjust the control suture in such a manner as to produce a state of parallelism between the visual axis of the two eyes. This is accomplished by placing the patient's correcting lenses over the eyes and directing him to look at a candle light across the room. A Maddox rod is placed over the eye upon which no operation has been performed with the axis in the horizontal meridian: this will cause the patient to see the candle light with the eye upon which surgery has been performed and a vertical streak of light with the other eye. A surgeon's knot is placed in the control suture and tightened until the vertical streak of light is seen to pass through the candle light, using the patient's correcting lenses. The loose ends of the control suture are then fastened on the patient's forehead with a piece of adhesive tape (Figure 8). The lock knot is not placed over the surgeon's knot in the control suture until the end of the second or third day, after readjustments have been made if found



Fig. 8. Ends of control suture held up on forehead with adhesive tape.

necessary. The eye is not patched, but the patient must wear his correcting lenses while convalescing in an attempt to establish a better balance or working relation between the muscles of accommodation and the muscles of convergence.

Postoperative Adjustment: In forty-eight hours the Maddox rod is again used while the patient looks at a candle light with his glasses on, and if necessary the eye can be readjusted as it was in the operating room. The lock knot is then placed in the control suture and the ends cut off. It is not always necessary to make any adjustment on the second day, since in many instances the eye will be in the same relation to the other eye as it was after the first adjustment in the operating room.

The patient is usually kept in the hospital four days. The conjunctival suture is removed the day the patient leaves the hospital and the control suture is removed on the fourteenth day.

SUMMARY

1. The operation is applicable to any form of ocular deviation in which a recession operation is indicated.

2. The eye can be readjusted on the second or third day after the muscles have recovered from the influence of the anesthesia and the muscle tone has returned.

3. The technic is simple and uncomplicated.

4. No patch is placed over the eye but the patient wears his glasses during convalescence.

5. The operation can be performed with the least amount of trauma.

6. The results are good.

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PHYSIOLOGY OF THE LARYNX AND PHONATION*

GORDON F. HARKNESS, M.D., Davenport

Phonation plays an important rôle in the life of man. To the larynx, the so-called voice box, is assigned the function of phonation. In our knowledge of the physiology of the various organs of the body, it is surprising how prevalent are the misconceptions concerning the manner in which the larynx performs its task.

Little thought is given to the phylogeny of the larynx. As an organ of voice, it developed late—a special adaptation of an organ whose primary purpose was to provide a valve to prevent the entrance of water and food into the air passages. It appears first as a simple muscular sphincter to guard the entrance to the pulmonary outgrowth. It is a mere fissure in the midventral wall of the lung fish. Ascending the evolutionary scale to the point where the lungs are used during periods of activity, there came the necessity of a dilator mechanism and with it the necessity of greater stability. This latter was provided first by lateral cartilages, and then separated from them the arytenoid cartilages to facilitate the opening of the orifice. In order to maintain the patency of the tube, the lateral cartilages fused to form the cricoid cartilage. The thyroid cartilage apparently was developed to fill in the gap between the hyoid and the cricoid ring, adding greater firmness and providing an advantageous anterior point of attachment for the sphincteric group of muscles. The cricoid, the thyroid, and the arytenoid cartilages, with the sphincteric and dilator muscles and thyro-arytenoid folds, were derived from the pulmonary outgrowth to primarily serve in a respiratory capacity.

Negus points out that the larynx undergoes certain modifications for the purposes of olfaction, that nasal respiration was first developed with the intent of olfaction and that a prime purpose of the epiglottis was to facilitate nasal respiration with the mouth open. Quoting Negus, "All keen scented mammals, with rare exceptions, have a big epiglottis in contact with a long soft palate."

The larynx is built up on the rigid cricoid carti-

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lage; it is the stable component. Built more truly in the shape of a Gothic arch in lower species, it retains in man a form which makes the sphincteric musculature weak in preventing air from getting out but strong in opposing force from above.

The development of the air tract varies according to the needs of the animal. Depth of respiration is limited by lung capacity. Fast running animals have large tracheas, because rapid exchange of air demands a large trachea. They have the larynx in closer apposition with the nasopharynx, thereby eliminating a gap in the air tract. The entire air tract from the anterior nares, which points forward, is straighter, thereby avoiding points of friction. This is well exemplified in the deer. The length of the arytenoid cartilages is a measure of the ability to open the glottis to a maximum extent. Seven-tenths of the diameter of the glottis formed by the arytenoid cartilages is the optimum, which is approximated in the antelope and horse. In man, due to the position of the head and the tucking of the chin, the air tract is tortuous and the length of the arytenoid cartilages is but 4.5 of the diameter of the glottis.

The movements of the glottis in carrying out its primitive purpose as a protective closing valve are made at the level of the aryepiglottic folds and not at the glottic chink. In the lower forms of life with sac-like lungs the glottis prevents collapse of the lungs, but rigid thoracic walls relieve the larynx of this duty. The glottic valve in man can offer a certain obstructive influence to expiratory air, thereby helping to maintain uniformity of the respiratory rate. It is the bronchial musculature, however, at the beginning of expiration which forces air back into the air sacs, facilitating the exchange of oxygen and carbon dioxide and eliminating dead air spaces.

The necessity that the lungs be protected from the entrance of food and water brings about modifications of the larynx because of deglutition, and this is further influenced by the diet of the animal. In amphibians, most reptiles and birds, the larynx is simple and slit-like, stabilized with cartilaginous rods, and offers little resistance to the passage of food. In some snakes the larynx can be protruded to the level of the front teeth. With efficient aryepiglottic folds, there are lateral food channels on either side of the larynx which may permit liquid and semiliquid food to pass without interfering with respiration. We see this particularly in herbage eating animals who must consume large quantities of such food for their sustenance. The epiglottis does not fall back like a trap door. In man the larynx must be closed during the passage

of solid food or a large amount of fluids, and this is accomplished by the sphincteric groups of muscles—the interarytenoid, aryepiglottic and the thyro-arytenoid muscles. The larynx is raised, the epiglottis is drawn up toward the tongue and away from the palate, and the arytenoid cartilages are drawn forward to the tubercle of the epiglottis and pulled close together. This tilting forward of the larynx also facilitates the opening of the esophagus and at the same time brings the opening more in line with the axis of the trachea.

The larynx in some animals is closed only by sphincteric muscular action, but this is less efficient than by a mechanical valvular type of operation. Negus shows that this type of larynx is not necessary for phonation, as seen in the cat tribe and hyenas. There are some exceptions, but the so-called inlet type of valve predominates in those animals who use their fore limbs independently; this is particularly exemplified in arboreal animals such as climbing monkeys and the higher apes. With the valve closed, no air can enter the lungs, the thorax is prevented from expanding and the ribs give a fixed point of origin for the pectoral muscles. The abdominal muscles also participate in the rib fixation. The full effect of muscular pull is accomplished, together with an ability of the diaphragm to contract to raise intra-abdominal pressure because of a fixed thorax. The laryngeal valve is an integral part of this mechanism, yet its presence in no way indicates the animal will have outstanding phonatory ability.

When considering the larynx as a phonatory apparatus which reaches its highest development in man, it is well to bear in mind that such was not its primitive purpose. It is an imitative function depending for its development on the sense of hearing. It is a false assumption to say that voice is sound produced by the vibrations of the vocal cords. Birds have voice, yet their vocal apparatus, the syrinx, is located at the bifurcation of the trachea. Many mammals that are decidedly vocal have no vocal cords. Before considering voice as a purposive production of sound, one should briefly review the physical properties of sound. Sound consists of vibrations in the air of a frequency appreciated by an auditory apparatus. If the vibrations are exactly alike there is produced a certain pitch, the pitch rising with the frequency of the vibrations. In natural sounds we do not have a simple pitch, but rather several pitches, and their combined effect is the so-called resultant tone. The blends of the pitches give the so-called quality to tone, always depending on the predominating fundamental pitch. Noise is a jumble of irregular vibrations. If the overtones, the accessory partial pitches, are not far removed from the fundamental

pitch, the tone is mellow and pleasing, but if higher overtones are accentuated the effect is one of harshness or shrillness. Loudness depends on the amplitude of the individual vibrations, which increase as they become greater. In the appreciation of the sound of a voice, there is to be considered pitch, tone, quality and loudness.

If a moving column of air is completely or partially interrupted in its exit by an aperture at a rate within the limits of human audibility, we note a sound. If this is done in a rhythmical manner, we appreciate it as a musical sound. Man can produce these independent of the larynx, whistling by the lips, snoring by the palate, trilling by the tongue, and esophageal speech by the laryngectomized individual.

An object capable of rhythmic vibrations will throw the air into vibration, and these vibrations may transmit the same to other surfaces. The loudness of sound will vary with the area of the vibrating surface, its substance, the amplitude of the vibrations and the environment. The wood-pecker uses the hollow tree; the guitar string by itself would not produce a sound of great audibility but can do so when reinforced by its resonating chamber. The utilization of sound for the purpose of communication we speak of as voice. It is the most successfully developed in mammals. In man it becomes an elaborate mechanism and here reaches its highest degree of perfection with a definite association between the larynx and the pulmonary system; yet its development depends on its ability to produce audible sensations. The larynx is not the only organ of phonation since in birds it is not so utilized, being replaced by a separate organ, the syrinx, located at the bifurcation of the trachea. The vocal powers of the bird are in direct proportion to the complexity of the structure of this organ. Short arytenoid cartilages with long folds mean better adaptability for voice production. The cat tribe does have short arytenoid cartilages and long folds, but the folds consist of connective tissue and muscle with epithelial covering. They in no way resemble vocal cords as we understand them; that is, sharp-edged, fibrous, elastic bands capable of being stretched.

The larynx, which is the expanded upper part of the windpipe, can well be thought of as a primary valve in the pulmonary air tract modified for the purposes of phonation. The framework of cartilage serves to keep the air way patent and affords origins and attachments for certain muscles. As a whole it appears to be suspended in a sling from the hyoid bone. Of the two main cartilages, the cricoid and the thyroid, it is the former that gives stability and acts as a true base. The latter, through the medium of movable facets,

actually rides on the cricoid cartilage. Likewise on movable facets, the arytenoid cartilages ride on the upper surface of the posterior part of this ring. The thyrohyoid and the cricothyroid membranes, strengthened by ligaments and assisted by bursa to facilitate smooth action with the cartilages, mold the parts into an integral structure. The aryepiglottic folds, bulging with the cuneiform and corniculate cartilages, aid in forming the side walls. They are for the protection of the air passages during the passage of liquids and food and reach their greatest development and serve to a greater degree in herbivorous animals. The function of the epiglottis is almost vestigial in man. The arytenoids are part of the cartilaginous scaffold and serve in the opening of the glottis during respiration and the closing of it during phonation and deglutition. They also serve to regulate intrathoracic pressure.

The larynx is not rigidly fixed and extrinsic muscles permit and limit changes of position. Within the larynx there is an elaborate intrinsic musculature to serve the organ in its added function of phonation. These muscles are the cricothyroid; the crico-arytenoid posterior; the cricoarytenoid lateralis; the thyro-arytenoid internal and the thyro-arytenoid external, which are the same muscle; the thyro-epiglottic; the transverse arytenoid; the oblique arytenoid; and the aryepiglottic. These muscles are all paired with the exception of one, and all are inside of the larynx with the exception of one, whose function is really intrinsic. For their primary function they are to be divided in sphincteric and dilator groups; and for phonetic function into abductors, adductors and internal tensors.

The paired crico-arytenoid posterior muscles constitute the dilator and abductor group. The thyro-arytenoid, the crico-arytenoid lateralis, the inter and oblique arytenoid, and the aryepiglottic muscles constitute the sphincteric group. The arytenoid muscles draw the arytenoid cartilages closer together and the thyro-arytenoid and crico-arytenoid lateralis muscles adduct the cords. The oblique arytenoid muscles are prolonged into the aryepiglottic folds, fusing with the aryepiglottic muscle. The upper fibers of the thyro-arytenoid muscle curve upward into the aryepiglottic fold, here called the thyro-epiglottic muscle, and in turn fuse with the aryepiglottic muscle.

Within the larynx there are two pairs of elevated folds which project inward, the upper are called the vestibular folds and the lower the vocal folds. The space above the former is the vestibule and that between the two folds the ventricle of the larynx. The space between the upper pair of folds is the rima vestibuli and that between the

lower the rima glottidis. These folds are made by parts of the same muscle, the thyro-arytenoid. The upper fold has fewer muscular fibers and ends in a ligamentous edge. The lower, the vocal folds known as the vocal cords, extend anteriorly from the vocal process of the arytenoid cartilage to the angle of the thyroid cartilage. They are not really cords but bands of yellow elastic tissue and are triangular in shape with the flat surface above. They are intimately associated with and form a smooth pressure-resisting covering for the thyro-arytenoid muscle. They are continuous with the conus elasticus, which bounds the space below the vocal ligaments. Misconception often exists concerning this area. The opening in the cricoid cartilage is circular and the rima glottidis is an anteroposterior slit. From the upper margin of the cricoid cartilage up to the vocal process of arytenoid muscle and to the vocal ligaments there extends a thin sheet of elastic tissue bound externally by the lateral crico-arytenoid and the thyro-arytenoid muscles. This triangular shaped space is known as the conus elasticus.

The cricothyroid muscle, classified because of function as an intrinsic muscle, is in reality an extrinsic muscle originating from the arch of the cricoid cartilage; its fibers spread upward and backward to the inferior horn and lower margin of the lamina of the thyroid cartilage. The more anterior or more vertical fibers draw the anterior parts of the thyroid and cricoid cartilages closer together and the more oblique fibers pull the thyroid cartilage forward. The effect is to increase the anteroposterior diameter of the larynx at the rima glottidis. For this reason the muscle is commonly spoken of as the tensor of the vocal cords.

There is practical unanimity of opinion as to how these muscles act as sphincters and dilators but not when functioning in a phonatory capacity. Cunningham, following the old conception, states, "When the cricothyroid muscles cease to contract, the relaxation of the vocal cords is brought about through the elasticity of these ligaments, the thyro-arytenoid muscles must be regarded as antagonists to the cricothyroid muscles. They relax the vocal cords and when they cease to act the elastic ligaments again bring about a state of equilibrium." Negus in his monumental work on the mechanics of the larynx points to the confusion of ideas and refutes many of the older conceptions that the tonal range depends on the elasticity of the cords. These cords are absent in hyenas, sheep, goats, monkeys and cats, which demonstrates that their presence is not necessary to phonation. Certainly the last named group has earned a reputation for midnight phonatory power. It is a misconception to consider that sound depends solely on the vocal

cords and that pitch is due simply to the degree of stretching of these cords. The larynx is not a simple, stringed instrument; it is physically impossible to produce notes as deep in pitch as a bass voice by a string or reed as short as the vocal cords. As simple tendons, stretching would be incapable of accomplishing the pitch range of the human voice. The mechanism must be one able to throw the tracheal and pulmonary air into vibrations consistent with this range. Long thyro-arytenoid folds favor a wide phonatory range, which is evident in the cat tribe. Long arytenoid cartilages sacrifice this ability to better opening of the larynx for a more rapid exchange of air. This is seen in birds, marsupials, and fast running animals.

Air currents may be vibrated at the lips and by the tongue, muscles of the pharynx and palate. We see this in the laryngectomized individual when he first swallows air. Likewise, with the buccal and pharyngeal air thrown into vibration by a mechanical device, one can phonate and articulate without laryngeal phonation.

Negus and Jackson have shown that former conceptions of the phonatory mechanism are to be refuted and that in the thyro-arytenoid muscles we have structures capable of tonic contraction which are able to supply rigidity to the margin of the fold containing elastic tissue. The combined muscular actions for the purposes of phonation are different than those for dilation and sphincteric control. The thyro-arytenoid muscles by themselves would have a pursing or orbicular effect. There must be provided a fixation of the folds anteriorly and posteriorly, and this is accomplished by the cricothyroid cartilage anteriorly and the crico-arytenoid posterior muscle bracing back the arytenoid cartilages. The arytenoid and lateral crico-arytenoid muscles, by bringing the arytenoid cartilages together and with their adductive function, counteract the abductive force of the crico-arytenoid posterior muscle. With this guying or fixation accomplished, the thyro-arytenoid muscles can supply firmness to the glottic margins. It is the varying degree of contraction of this muscle which supplies the active elasticity to the glottic chink, the mucous membrane and connective tissue of the cords forming a smooth contact surface. Jackson points out that there exists an analogy between the laryngeal phonatory mechanism and that of the lips of the cornetist. With the latter, the lips are the vibratory mechanism. Here also, stretching of the lips alone could not stand the necessary strain, but a guying of the angles of the mouth, together with the orbicular muscular action, is able to provide the necessary firmness of margins.

The larynx is really an air column instrument: the pitch is controlled by the thyro-arytenoid mus-

cle, which possesses elasticity and is in a constant state of tonic contraction during phonation. Lung breathing animals find it most convenient for phonatory purposes to throw the pulmonary air into vibration and use it during expiration. Considerable air is required for efficiency and the rate and pressure during expulsion must be under accurate control. In air column instruments the pitch varies inversely as the column; the diameter of the column can also affect the pitch, and a fundamental note is an octave higher in an open tube than in a closed tube.

The subglottic space is a closed tube; the supraglottic space is an open tube. In man it is the rhythmical releasing of a column of air under pressure, by the tonic contraction of the thyroarytenoid muscles, which constitutes the essential pitch-producing mechanism. It seems little influenced by other factors, although sopranos are usually short-necked individuals. The air in these lower and upper spaces is thrown into vibration. Loudness of sound produced is not measured alone by the force of the air against the lower thyroarytenoid folds. Increase in volume is aided by the air in vibration in the sub and supraglottic spaces and the rhythmic release of the air. Pitch in itself is without quality, but the extra laryngeal resonating chambers, by accentuating or suppressing the fundamental note and its overtones, give us quality of tone. Finally, with the lips and the tongue and the muscles of the pharynx we break up the tones into the words of the spoken voice. The thyro-arytenoid muscles are intimately associated externally with the elastic cone. This same intimate association extends to the vocal processes of the arytenoid cartilages and to the thyro-arytenoid fold. The latter, supplemented with elastic tissue, is actually the edge of the muscle. The tonic contractions of this muscle are able to throw the subglottic air column into vibration and at the same time synchronize the puffs of air released through the glottic chink. Sometimes the effect is melodious and sometimes it is not; sometimes the possessors of this priceless gift use it with discretion and respect for others and again they make use of it only for incessant clatter. Be that as it may, as one delves into the mechanism of phonation one marvels at the ability of the thyro-arytenoid muscle which works so delicately, so faithfully, and often under such trying conditions to produce the principal means of communication of mankind.

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Discussion

Dr. Ralph C. Carpenter, Marshalltown: As far back as the time of Aristotle, the larynx was regarded solely as an organ for the production of tone and practically all physiologic research has been directed along this line, while other functions of the larynx have been relegated to a position of very minor importance. Only recently have authorities such as Negus, Guthrie, Curry, Russell, Pressman and Jackson pointed out that the larynx developed not primarily for purposes of speech but rather to function as a sphincter valve in order to effectively prevent anything but air from gaining entrance to the lower air tract. The development of the sound producing mechanism came as a secondary and much less important function.

It is interesting to read that Aristotle believed that the width of the glottis governed the pitch of the laryngeal tone, and the same belief was held by those who followed him for many years. In 1707, Dodart revived this theory. A quarter of a century later, in 1741, Ferrein pioneered physiologic research on the larynx by means of experimental studies on freshly killed hogs, oxen and swine. He concluded that sound originated when and where the glottic edges met and were parted by a pneumatic blast, and also that pitch was controlled by contraction of the intrinsic muscles of the larynx. For almost a century nothing more was done until Johannes Muller, in 1839, repeated the experiments of Ferrein and confirmed them. Since the middle of the last century, a large mass of literature has accumulated on various phases of the physiology and anatomy of the larynx. During the last ten years, however, great strides have been taken through the use of ingenious devices to visualize and photograph the living larynx.

Pressman, in a masterful presentation, recently brought to our attention the mechanism of the sphincteric action of the larynx. There is, first, an approximation or closure of the vocal ligaments or cords which is a rather inefficient barrier into the lower airway; second, the false cord sphincter, which is produced by the approximation of the false cords in the midline; and third, the aryepiglottic sphincter, which is formed chiefly by the action of the aryepiglottic folds. Thus, nature in her characteristic abundance has produced not a single sphincter, but a triple sphincter. I might add that a fourth, the subglottic sphincter, is mentioned by some. The function of this sphincter mechanism is to prevent liquids and food from gaining entrance to the lower air tract and to render possible the fixation of the thorax by trapping air within the thorax, thus rendering a greater stability and usefulness to the pectoral group of muscles. This sphincter mechanism is also of great importance in cough, since increased intratracheobronchial pressure is possible to increase the expulsive effort.

Jackson has pointed out that there are several elements in the mechanism of the human voice. These elements are the vocal cords, variations in the infraglottic or tracheobronchial air column, and variations in the supraglottic air column and the molds of speech. Supplementary factors are the size and shape of the glottis and the tracheal air pressure. I should like to ask Dr. Harkness about his opinion on the relative importance of the infra and supraglottic air column. In reviewing recorded cases of tracheal tumors, there is very little mention of any marked alteration in voice production, while it is well known that alteration in the supraglottic area is prone to cause changes in the quality of the laryngeal tone.

Detailed study of the vocal cords during phonation show that they do behave somewhat like the strings of a stringed instrument. Pressman, after studying his own and the Bell Telephone films of the living larynx, concluded that there are the following three methods by which tones of varying pitch are produced and that any given tone is probably a combination of all three: (1) A tightening or increase of tension occurs as the scale is ascended. (2) Functional foreshortening of the cord is accomplished by portions of the cord in contact and damping a similar length of the opposed cord. Thus by means of this damping, a shorter segment of each cord is free to vibrate and a higher tone is produced. As higher tones are produced, the length of the damped segment increases and the vibrating segment becomes shorter. As early as 1886, French demonstrated the principle of functional foreshortening of the vocal cords. Leon Strong, in 1935, described this action very clearly and further noted that when a falsetto tone was produced, the single vibrating edges of the cord appeared to suddenly assume the form of a double internodal or looped segment with a node between the loops. Upon resumption of the normal register, the double segment seemed to snap into a single segment again. (3) Also, as a result of the damping, the chink between the cords becomes smaller; the longer the damped segment, the narrower the glottic chink and vice versa.

In summary, elevations of pitch result from increased tension of the cords, shortening of the vibrating segments by damping, and a narrowing of the glottic chink. One must also take into account variations in the mass of the vibrating cord which have received little attention.

Dr. Cecil C. Jones, Des Moines: My rôle in this discussion is that of calling to your attention the excellent studies of the larynx made by Pressman and the Bell Telephone Laboratories. By taking colored ultra-slow motion pictures at 4,000 frames per second they were able to project and view the various movements of the larynx at 1/250 of its normal speed of action. Pressman published his conclusions of such studies in the March, 1942, issue of the Archives of Otolaryngology, which I highly commend for your reading.

I am going to project a few cuts clipped from this article to amplify Pressman's conception of how the larynx functions. First, let it be said that the

larynges of all normal persons are anatomically alike, although they vary in size and shape. No two larynges are any more exactly alike than any two faces are exactly similar. Furthermore, different individuals employ a somewhat different mechanism to produce the same tone in the production of voice or phonation. Generally speaking, it can be said that in the production of the lower tones the glottic chink is widest in the posterior part, and the cords are the shortest; in the production of the middle tones the chink is linear in shape with the cords the longest; for high notes the cords are shorter and the chink is open widest anteriorly.

Fundamental tones are an aerodynamic phenomenon—the result of a column of air striking a narrowed lumen which it sets in vibration. This narrowing of the expiratory lumen is made by the vocal cords, which are capable of changing their length, tension and contour. Such variations result in variations of pitch. Much modification of the fundamental tone is required to convert it into speech. This is accomplished by the muscles of respiration, the false cords, the tongue, teeth, lips and resonating chambers.

The laryngeal mechanism has two nerve supplies, one cortical near Broca's area, under control of the will, and an involuntary center in the medulla. Under various conditions each center exercises control over the other.

The vocal cords are the vibrating components of the larynx and consist of two fibrous bands of yellow elastic tissue forming the center of the cord. This is surrounded by striped voluntary muscle upon which is superimposed a ciliated columnar epithelium. At the cord margin this epithelium is non-ciliated, stratified, and squamous in order to stand the trauma of the opposing cord. In the cleft or ventricle formed by the overhanging false cords are numerous mucous glands for the purpose of lubricating the cords.

For the production of a given tone, various mechanical phases transpire. The cords are first adducted to the midline and so held under varying degrees of tension and elongation. The first step in this adduction is an inward rotation of the arytenoid muscles by the crico-arytenoid muscles; second, the contraction of the interarytenoid cartilages approximates the arytenoid muscles; and third, closer approximation is due to contraction of the thyro-arytenoid cartilages. At this stage a chink still exists due to the slackness of the cords. The cricothyroid muscles take up this slack, approximating the cords by raising the thyroid cartilage. This completes the first or adductive phase and the cords are now in position for phonation. The thyro-arytenoid muscles are intrinsic, segmented muscles capable of pulling the cords apart in segments of various lengths producing various apertures of width and length for escape of air under pressure. By their own elasticity these separated segments of the cord spring back to the midline in a wavelike manner, which constitutes the vibrations of the cords. During this process, the arytenoid muscles remain fixed in adduction.

In the performance of whispering the arytenoid

muscles do not approximate, which results in a large air leak posteriorly. It is apparent, therefore, that whispering is no more a form of vocal rest than is the usual use of the voice.

MASSIVE GASTRODUODENAL HEMORRHAGE*

JOHN L. KESTEL, M.D., Waterloo

Massive gastric hemorrhage with hematemesis and shock is always alarming. However, it is usually due to a benign duodenal or gastric lesion which will stop bleeding spontaneously. It is seldom necessary to consider malignancy; only an extensive, ulcerating adenocarcinoma of long standing will bleed profusely. There are occasional exceptions, however, and certain other possibilities should be kept in mind.

The sudden onset with collapse, nausea, and either bloody vomiting or copious bloody stool, is always due to gastric or duodenal hemorrhage. No other part of the gastro-intestinal tract ever bleeds that rapidly, irrespective of what type of lesion may affect it. Bleeding from a polyp, ulcer or malignancy of the colon may be profuse, but it is never accompanied by sudden collapse. The lesion is usually a benign ulcer in either the stomach or the duodenum, but much more frequently it is in the duodenum. Gastrojejunular ulcers in gastro-enterostomized patients frequently bleed.

In about one-fourth of the cases no ulceration can be demonstrated anywhere from a radiologic standpoint. This is disappointing to the radiologist, since the referring physician implies the patient has an ulcer and simply wishes to know where and how large it is. It must be assumed that the ulceration may be very shallow. Acute superficial ulcerations or abrasions have been found to be the sole cause of profuse bleeding at surgery, gastroscopy and autopsy. X-rays for those individuals having no symptoms prior to their hemorrhage are apt to be negative. The proportion of negative x-ray findings is greater in young people. Young women rarely have a demonstrable lesion to account for their hemorrhage.

Statistics vary concerning the mortality rate of gastric hemorrhage. Some institutions report as high as 7 per cent, but in regular practice it is not that high. In approximately two hundred and fifty cases in the Waterloo area, during the past five years, there were only two deaths. While the mortality rate is always very low, it rises with age. Our most recent case was in a lady sixty-eight years of age who expired in a few minutes

after vomiting a large quantity of blood. The bleeding resulted from a large benign ulcer, high on the posterior wall of the stomach, which had eroded into a large artery on the surface of the spleen. I recall a man fifty-eight years of age whose gastric hemorrhage did not stop, although he survived for one week before becoming completely exsanguinated. Autopsy revealed a sclerotic artery projecting about one-half centimeter from the base of the duodenal ulceration. In such instances sclerosis of the arteries and firmness of the scar obviously prevent the contractile powers of the exposed tissue from aiding in the arrest of the escape of blood.

With a negative x-ray, possibilities other than peptic ulcer should be considered. Cirrhosis of the liver with gastric or esophageal varices may cause severe and often fatal hemorrhage; this is particularly true in Banti's disease. While other obvious physical findings, such as enlarged liver or ascites, are generally present, hemorrhage may occur relatively early. I recall a young man who had what was believed to be progressive encephalitis, and he had severe gastric hemorrhage. Our attention was directed to the liver, which was definitely, although not greatly, enlarged. On reconsideration of his entire case, it was obvious that he had a disease known as hepatolenticular degeneration, which is a combination of a particular type of encephalitis associated with degeneration and cirrhosis of the liver.

Recently, I have encountered three cases of diaphragmatic hiatus hernia which had sudden, severe, gastric hemorrhage. In one the duodenum was irritable, which suggested the possibility of superficial duodenal ulceration, but the others were in all respects negative on x-ray examination. An esophageal hernia often is associated with gastric bleeding, and may even produce anemia, but usually it is of the slow, oozing variety. It would be difficult to say that diaphragmatic hernia contributes greatly to sudden, severe, gastro-intestinal hemorrhage.

Benign tumors of the stomach, which are extremely rare, occasionally bleed profusely. Gastric leiomyomas are particularly apt to ulcerate, and the bleeding is periodic and profuse. Likewise, leiomyosarcomas might bleed profusely. None of these tumors occurred in our series of two hundred fifty cases. Obviously they are so rare that they need not be given serious attention in general practice.

Blood dyscrasias, including the hemorrhagic diseases, rarely account for profuse gastro-intestinal hemorrhage. Isolated instances of hematemesis in hemophilia or hemorrhagic purpura have been reported. Bloody stools occur in any kind

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of purpura. A very small percentage of the cases will fall into this class when all instances of gastric hemorrhage are considered.

The question often arises whether a gastric ulcer which bleeds profusely might be malignant or undergoing malignant change. The base of a malignant ulcer is firm; larger arteries are compressed or displaced by the invading carcinoma before degeneration and ulceration occur. Obviously, it is less apt to permit the sudden escape of a large amount of blood than a similar benign lesion. In the series of two hundred fifty cases reviewed, early malignancy was found only once. This one was of the Grade IV variety; its growth had been so rapid that it was accompanied by little induration, and the involvement was diffuse. Radiographically, it did not present the appearance of a sharply defined ulcer.

In two instances, multiple ulcers were found. One patient had two in the midportion of the stomach, the other had a gastric and a duodenal ulcer. There was some concern about malignancy in the last case, since the gastric ulcer was large and the patient was aged. It was believed that the bleeding could originate from the benign duodenal ulcer, and that the gastric lesion might be malignant. This patient has not been rechecked, but his physician tells me that he has become symptomless and has gained weight in the past four months.

While it is proper to assume that massive gastro-intestinal hemorrhage is due to a benign ulcer in the duodenum or stomach, which will stop bleeding and recover spontaneously, there should be some reservation in making a too hasty diagnosis and prognosis. This applies especially if the patient is past middle life. There is a remote possibility that the bleeding from the ulcer may not cease, or that the patient may be having fatal bleeding from cirrhosis of the liver. The lesion is rarely malignant, but malignancy cannot be positively excluded without an x-ray examination. A circumscribed ulcer found radiologically is almost certain to be benign.

Discussion

Dr. Harry A. Collins, Des Moines: Dr. Kestel has thoroughly reviewed the common and infrequent causes of massive gastroduodenal hemorrhage. In dealing with this symptom complex, I think it is important to keep in mind that hemorrhage from the gastro-intestinal tract is rarely fatal. However, we should always make a determined and judicious effort to establish the cause of hemorrhage. The statistics prove rather conclusively that hemorrhage usually occurs as the result of duodenal ulcer, gastric ulcer, cirrhosis of the liver, or Banti's disease. I should like to emphasize one point here. In spite

of these statistics, it is very prudent not to jump at conclusions and make a hurried diagnosis, and in so doing overlook a type of lesion which if not cared for promptly and early might result in the death of the patient.

I should also like to call to your attention lesions of the pharynx, larynx and lung which, when bleeding profusely, may simulate a gastro-intestinal lesion. A good history, careful physical examination, thorough roentgenologic and gastro-intestinal studies, together with careful blood studies and a complete knowledge of the causes of massive gastro-intestinal hemorrhage, will leave few such cases undiagnosed and improperly treated.

GUNSHOT WOUND OF THE SPINAL CORD

LT. CMDR. WALTER D. ABBOTT, U.S.N.R., and

LT. ROLAND T. SMITH, M.C., A.U.S.

The incident of gunshot wound of the spinal cord is rare in civilian practice, and because of its interest at the present time, either military or civilian, it is felt that this case report should be submitted.

A foreign body which has been projected into the vertebral column soon becomes surrounded by a shell of bone which makes removal difficult, and if it is embedded in the vertebral body no harm to the spinal cord is apt to result. If it is situated at the junction of a pedicle with the body, which is the most common site, the new bone laid down is more extensive and frequently produces compression at a later date. It is obvious that there are many cases of gunshot wound in which there is a complete transection of the cord. In this type, death follows either from shock, respiratory failure or ascending pyelonephritis secondary to a paralyzed bladder. However, a bullet which penetrates the subarachnoid space may sink downward and produce pressure on the spinal cord at a level which is lower than its original site of entry. In a rare instance, the foreign body may encroach upon the spinal cord and produce symptoms of paralysis; here surgical intervention is justified.

A careful review of the literature reveals that in only a small number of cases did transection of the cord not occur, and it is difficult to evaluate the clinical significance because of the variety of injuries. In such instances complete paralysis usually occurs immediately after injury, and bloody cerebrospinal fluid is common. It is our opinion that a gunshot wound which produces compression of the spinal cord, without obvious evidence of transection, should be operated upon as soon as the patient has recovered from shock.

CASE REPORT

Mrs. E. G., thirty years of age, was shot through the neck and right shoulder with a thirty-eight caliber revolver, and was admitted to Broadlawns General Hospital on November 25, 1941, in a condition of shock. Examination revealed that one bullet had entered the left submental area and appeared to be lodged posterosuperior to the shoulder level one and one-half inches lateral to the midline. Another bullet had entered the neck at the midline above the thyroid gland and appeared to be lodged below the angle of the scapula in the postaxillary line. An additional bullet opening was noted beneath the right clavicle, one and one-half inches to the right of the midline, and appeared to have made its exit to the right of the scapula. The pupils were equal and the general physical examination was negative. The neurologic examination revealed a complete paralysis of the right upper and lower extremities; the pulse

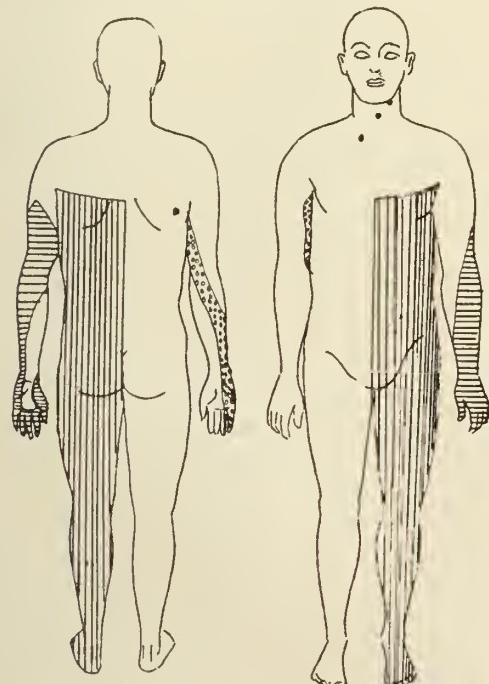


Fig. 1.

- ||| Complete loss of pain and temperature.
- == Twenty-five per cent loss of pain and temperature.
- ooo Hyperesthesia. Touch, stereognosis and vibration normal.
- oooo Right arm and right leg completely paralyzed.

in both wrists was of equal volume and rate. The reflexes were absent on the right side of the body except for a slight response upon plantar stimulation, and sensation was absent over the left side of the body, as illustrated in Figure I. There was a slight loss of joint, pain and temperature sensation on the right side as illustrated. The patient was treated for shock by the intraven-

ous administration of blood plasma and glucose. The following day her condition was improved and spinal puncture revealed clear fluid—there was a slight response on jugular pressure on the left side and no response on the right. Unfortunately, the



Fig. 2

Roentgenogram revealing bullet and fracture of the cervical spine; anteroposterior view.



Fig. 3

Roentgenogram revealing bullet and fracture of the cervical spine; lateral view.

specimen of spinal fluid was misplaced and a complete report of the laboratory findings cannot be submitted. Roentgenograms revealed a foreign metallic body at the pedicle of the fifth cervical vertebra and several small bodies among the laminae of the fifth and sixth cervical vertebrae on the right. These laminae showed evidence of a fracture.

Operation was deemed advisable and, under avertin anesthesia, an incision was made from the fifth to the seventh cervical vertebrae. Small fragments of bone were found to be torn off the

packs were applied in a manner similar to that described by Kenny¹ for the treatment of poliomyelitis; that is, they were applied leaving the joints exposed and were changed each hour for two weeks. The patient moved the right leg on the fifth postoperative day. The fourth figure reveals the sensory status and amount of improvement in motion on December 15, 1941.

The patient was able to walk on January 15, but she had difficulty in using the arm. A communication from her family physician states that she now uses the arm partially, but that there is numbness and weakness graded two, in his opinion, on a basis of four.

SUMMARY

A gunshot wound of the spinal cord should be operated upon when the patient has recovered from the state of shock. A preliminary spinal puncture should be performed, however, to eliminate the possibility of a transection of the cord as evidenced by blood in the spinal fluid and immediate and complete paralysis. The cases of transection of the spinal cord are hopeless; but there occurs a small number of cases in which the bullet penetrates to or near the spinal cord, partially involving this area and in which relief can be accomplished by proper surgical intervention.

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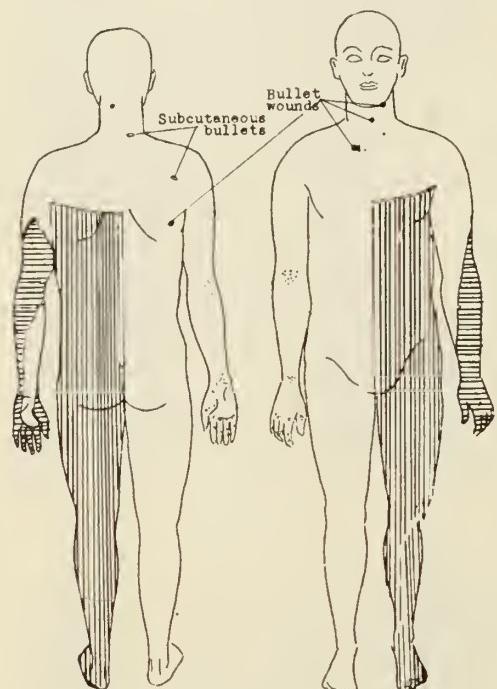


Fig. 4.

Complete loss of pain and temperature.

Twenty-five per cent loss of pain and temperature

Loss of position sense. Touch, stereognosis and vibration normal. Right arm completely paralyzed. Right lower: Flexion of thigh, twenty-five per cent of normal. Dorsiflexion of ankle gone, but dorsiflexion of big toe fifty per cent of normal. Other movements normal.

laminae of the fifth and sixth cervical vertebrae and three small portions of bone were removed. The dura was found to be torn, and there was a large hematoma which was removed. Because of the profound edema of the spinal cord, it was impossible to determine the degree to which it had been severed. Since only hemilaminectomy was performed, fusion or a cast was not considered necessary, and the wound was closed in the usual manner after filling it with several grams of sulfanilamide.

The patient was given hot packs and passive massage immediately after the operation. The

THE USE OF STEEL WIRE SUTURES IN THE REPAIR OF HERNIAS

JAMES W. AGNEW, M.D., and JOHN W. DULIN,
M.D., Iowa City

Since Babcock¹ first advocated the use of stainless steel wire for suture in 1934, there has appeared in the literature an increasing number of articles reporting the technical principles to be followed in its use, the results of groups of patients upon whom it has been used and the physical characteristics of the wire itself. Starting in December, 1939, fine stainless steel suture material replaced catgut in the repair of incisional and umbilical hernias by the members of the General Surgery Staff of the University Hospital in Iowa City. A month later it was used for inguinal hernias, and since that time nearly all of these conditions have been repaired with wire. Our study was carried out to obtain information on the results of steel wire sutures used in herniorplasties between December, 1939, and January, 1941.

The physical properties of sutures, as studied by Preston,² revealed the variability of the diam-

eter to be least in wire, while silk (braided serum proof), plain catgut, and chromic catgut follow respectively. Wire also showed the greatest uniformity in tensile strength. The tensile strengths found for the common suture materials are:

Suture	Grams Per Micron of Tensile Strength
Wire	10.55
Silk (braided serum proof)	7.00
Chromic catgut	6.82
Plain catgut	5.79

Silk lost one-third of its tensile strength after boiling ten minutes and one-half after boiling for thirty minutes. Most of the tensile strength was regained after drying for twenty-four hours. A test for the holding strength of knots revealed that plain and chromic catgut knots untied when subjected to the test. Two-thirds of the triple throw knots and all the surgeons' square and granny knots of silk untied. Steel wire knots subjected to the test remained tied. Furthermore, Preston² demonstrated that there is a loss of the tensile strength at the knotted portion of all types of sutures. This loss is as follows:

Suture	Per Cent Loss of Tensile Strength
Wire	30.0
Chromic catgut	28.0
Silk	24.0
Plain catgut	14.0

A recent experimental and clinical study by Wu and Pai³ of Peiping, China, has demonstrated the mild tissue reaction which occurs around buried wire as compared with other suture materials. This was true in both clean and infected wounds. We have been favorably impressed with the minimal reaction of tissue to the wire sutures and the speed of wound healing. Patients have less pain and discomfort in the wound, lower postoperative febrile reactions, and smoother postoperative courses. Pulmonary complications are rare, which is perhaps due to the less pain and discomfort in the operative area, and large doses of postoperative sedation are not required for the same reason. The movements of the patients in bed are increased and they exert more effort in riddling themselves of accumulated bronchial tree secretions.

Jones, Newell and Brubaker⁴ studied abdominal wall closure using different suture materials. They found six disruptions in fifty-four catgut closures, and four disruptions in fifty-eight combined wire and catgut closures. In a third group of eighty-one patients closed entirely by steel wire, there was only one disruption. A letter follow-up of this series of wire sutured hernioplasties was necessary. If a patient reported a recurrence or any trouble at all with the operative region, his referring physician was requested to examine him and report the findings. All questionable cases were counted as a definite recurrence. The pa-

tients studied had a postoperative interval of at least twelve months, and although there may be recurrences after this interval, it is known that the majority will have occurred by this time.

There was the usual predominance of males. The ages ranged from one and one-half years to eighty-five years. In 1937 a study was made of 1,656 hernioplasties performed at the University Hospital during the preceding ten years, and it revealed that 18 per cent of the patients were over sixty years of age. There was a great tendency toward recurrence in elderly patients. In recent years, therefore, we have declined to electively repair hernias in patients of this age group.

This report covers 347 hernioplasties of all types. Sixteen were omitted from the study because they could not be contacted. One of the patients died in the postoperative period, and four died of accidental deaths after leaving the hospital. This leaves 326 hernioplasties available for follow-up study and these were classified as follows:

Type of Hernioplasty	Number of Cases	Per Cent of Cases
Indirect	235	72.08
Direct	18	5.52
Saddle	5	1.53
Recurrent	14	4.29
Femoral	19	5.82
Umbilical	9	2.76
Incisional	26	7.95
Total	326	

All but twenty-eight of the operative repairs were performed by six resident surgeons and the technic of each surgeon was similar. The repairs were fashioned after standard procedures, and except for the change in suture material they were similar to the earlier series when catgut was used. In inguinal hernioplasties we take particular caution to secure a high ligation of the sac. We ligate the sac first with fine catgut and then at a slightly lower level with wire. A fine caliber wire (thirty-two gauge) is used for closure of the abdominal wall defect and a finer wire (thirty-five gauge) for ligation of vessels. A figure-of-eight suture with a knot of three loops is preferable and the excess wire is cut off as close to the knot as possible.

The following table shows the Bassini type of repair to be the most frequently used in inguinal hernias:

Type of Inguinal Hernia	Type of Repair	Cases	Recurrences
Indirect	Bassini	196	3 (1.53%)
	Ferguson	30	1
Direct	Halsted	9	2
	Bassini	10	0
Saddle	Halsted	7	0
	Andrews	1	0
Recurrent	Bassini	2	0
	Halsted	2	0
Total	Andrews	1	0
	Bassini	6	0
	Halsted	4	1
	Fascial graft	2	0
	Imbrication	2	1
		272	8 (2.94%)

The foregoing chart reveals a low recurrence for the indirect hernias, particularly those repaired by the Bassini method (1.53 per cent). With wire sutures, the recurrent hernias repaired by Bassini's method appear satisfactory since there were no recurrences. Of the femoral hernias, sixteen were approached through the inguinal region and three through the femoral region with the one recurrence in the former group. The umbilical and incisional hernias were all repaired by imbrication, with two recurrences in nine umbilical hernias and one recurrence in twenty-six incisional hernias.

Type of Inguinal Hernia	Hernias Repaired by Wire at University Hospital	Hernias Repaired by Catgut at University Hospital	Hernias Repaired by Fascia or Cat-gut by Shelley
Indirect Hernias (Total Cases)	235	1675	495
Indirect Recurrences	2.55%	7.6%	5.6%
Direct Hernias (Total Cases)	18	185	145
Direct Recurrences	-	9.8%	11.7%
Saddle Hernias (Total Cases)	5	62	-
Saddle Recurrences	-	10.0%	-
Recurrent Hernias (Total Cases)	14	104	210
Recurrent Recurrences	14.28%	22.0%	18.6%
Femoral Hernias (Total Cases)	19	-	140
Femoral Recurrences	5.2%	-	3.6%

The above chart gives a comparison of the recurrence rate of the various types of groin hernias. The figures include our wire suture repairs and our previous series of catgut repairs. In hernias of all kinds, the repair was much more effective when wire was used. Comparable series by Shelley^{5, 6, 7 and 8} indicate that wire is preferable to his methods of repair, namely by the use of fascia or catgut. Swinton and Sanderson⁹ reported a recurrence rate of 2.21 per cent in 226 cases of inguinal hernias repaired by silk. Silk and wire sutures have many similar features.

Since the introduction of wire sutures, and as a result of our enthusiasm over the excellent manner in which these wounds heal, we have been extremely liberal in allowing a greater degree of activity on the part of the patients. Before this recent technic, we routinely required the postoperative hernioplasty patient to remain flat in bed, or with the head-rest elevated but with complete support for the patient, for a minimum of twelve days. The patients were usually discharged from the hospital on their fourteenth day. In the wire closures, no attempt was made to immobilize the patients in bed during the early postoperative days, and they were allowed out of bed on their eighth postoperative day and discharged on the ninth postoperative day. We feel that the shortened postoperative bed rest has taxed the new method to a maximum. We have increased the percentage of elderly patients who are allowed out of bed each day immediately following operation. In these elderly patients who have been so treated, there is

not a single recurrence. Patients are allowed to return to manual labor six weeks from the date of operation. This convalescent period is one-half the formerly recommended time. All of these changes have constituted definite beneficial economic factors without any evidence of harm to the operative repair. At the State University Hospital, the time now required for hospitalization of three hernioplasty patients is two days less than that formerly required for two hernioplasty patients. An interesting additional finding was that bilateral simultaneous hernioplasty, by the wire technic, did not increase the chances of recurrences.

As expected, the incidence of wound infection was greatly reduced when wire replaced catgut. While wire cannot be given all the credit for this favorable trend, it must be an important factor since wound cellulitis, with or without drainage, occurred in only four cases (1.8 per cent) of the total 326 repairs. One cannot overlook the fact that this includes the incisional, the umbilical and the recurrent inguinal hernias. In the few instances where infection has developed, we have been impressed with the speed of wound healing. A wound closed with wire, which subsequently develops infection, heals much more rapidly than a similar complication which occurs in a catgut or silk wound. We have never experienced a chronic draining sinus caused by fine steel wire acting as a foreign body.

Pain in the wound has occasionally been caused by a wire suture. In such instances, removal of the suture has been required and it has been found that the pain was due to a long cut end or a very superficial subcutaneous stitch. More recently we have omitted all subcutaneous sutures, relying on obliterations of the so-called dead space by fairly snug pressure dressings.

The single death in this group occurred in a woman sixty-five years of age with an incarcerated umbilical hernia, operated upon as an emergency, with a diagnosis of probable strangulation. The patient also had suffered from a recent pathologic fracture of the femur secondary to a carcinoma of the uterus. The operation was not unusual; however, she died twenty hours later.

CONCLUSIONS

Theoretic disadvantages of repairing hernias by fine steel wire sutures may be considered by some physicians. The suture is fine, slick, and not easily handled; and, therefore, the operating time is increased. Because it is fine and strong, the tissues may be "cut-through." We feel this cutting quality is a recommendable feature since it

prevents strangulation of tissue. Our enthusiasm for wire has increased rapidly since we have given it a thorough trial and have observed the results.

SUMMARY

1. Our recurrence rate for all types of hernias repaired with wire suture is lower (3.68 per cent) than when they are repaired with catgut.

2. The mortality rate for this series was 0.3 per cent.

3. With this method a marked reduction in the average number of postoperative hospitalization days has occurred.

4. The patients have less pain and discomfort in the wounds postoperatively.

5. From our experience fine stainless steel wire is superior to other suture materials in the repair of hernias.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

BONE SARCOMA

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The classification of bone tumors based upon the correlation of the clinical, roentgenologic and pathologic pictures, which was undertaken twenty years ago by the Registry of Bone Sarcoma of the American College of Surgeons, has aided greatly in the diagnosis and treatment of these lesions. Nevertheless, because they are rarely encountered in general practice, they always represent a most serious diagnostic problem. The welfare of the patient depends so much upon early and correct diagnosis, as well as the institution of proper treatment. Perhaps in no other condition is there greater need for the closest co-operation between the clinician, roentgenologist

and pathologist if the best possible results are to be obtained. The case to be described is characteristic of one type of bone sarcoma.

CASE REPORT

Chief complaint: The patient, a white woman fifty-five years of age, was admitted to the Finley Hospital October 8, 1942, with a complaint of a painful swelling below the left knee.

Family History: The patient's father and mother died of unknown causes. One sister died at fifty-six years of age of unknown cause; one died at sixty-six years of age of cancer of the stomach; and one sister is alive and well. One brother died in infancy and two died late in life of heart disease and Bright's disease respectively.

Past History: Aside from one attack of malaria, the patient had always been well. The menses ceased about ten years ago.

Present Illness: Approximately ten weeks before admission the patient noticed a swelling in the upper end of the left tibia. Six weeks later it became painful; and since the pain increased, the patient sought medical advice.

Physical Examination: The patient was a well developed but pale and weak-appearing middle-aged woman. The temperature was 99.6 degrees, the pulse was 88, and the respirations were 20 per minute. The general head examination was negative. The upper teeth had been replaced by plates. The lower bicuspids and molars were lacking. The throat was not remarkable. The neck, lung, heart, breast and abdominal examinations were negative. Locally, there was a soft or boggy swelling at the upper end of the left tibia which was firmly attached to the underlying bone. The skin was movable over the mass and although it was red it did not feel warmer than the surrounding skin. The inguinal lymph nodes were not enlarged. The blood examination revealed 15,700 white blood cells with 79 per cent polymorphonuclear leukocytes, and 3,870,000 red blood cells with 12.1 grams of hemoglobin per 100 cubic centimeters.

X-Ray Examination: Examination of the left knee in two directions showed a bone defect on the anterior aspect of the region of the tibial tubercle. Here there was an erosion of the cortex with some periostitis, especially below the defect which gave the impression of radiating into the soft tissues. There was a moderate amount of sclerosis of the upper third of the tibia (Figure 1).

X-Ray Interpretation: If syphilis is ruled out, the lesion is a malignant bone tumor. This was



Fig. 1. Roentgenogram showing defect in tibia produced by the neoplasm.

done and since the serologic test was negative, the patient was advised to enter the hospital.

Course in the Hospital: During the first week the patient ran a temperature varying between 97 and 100 degrees and the pulse varied between 80 and 100 per minute. A blood examination the day after admission revealed 22,000 white blood cells, and four days later there were 16,200 white blood cells. The number of red blood cells remained at about 3,800,000, in spite of therapy. An x-ray examination of the lungs showed no metastases and one week after admission it was decided to amputate the leg above the knee.

Operative Notes: A tourniquet was applied well above the operative field and an incision was made over the mass, which exuded a large amount of blood. Small pieces of soft tissue were easily removed with the index finger and a frozen section showed it to be osteogenic sarcoma. The leg was amputated in the middle third of the thigh; all vessels were ligated, the nerve was injected with 95 per cent alcohol, and the fascia and skin were sutured. The patient left the operating table in fair condition.

Pathologic Report: The specimen was a left leg amputated in the middle third of the thigh. A red boggy swelling was seen below the knee joint. This had been incised for the biopsy. On extending this incision, a lobulated, soft, friable

tumor mass was found attached to the tibia. On sagittal section it had a folded appearance and showed hemorrhagic areas. The neoplasm ex-



Fig. 2. Photograph of a sagittal section of the tibia showing destruction of the cortex by the neoplasm.

tended from the medulla through the cortex outward to the subcutaneous mass (Figure 2).

Microscopically the section showed fairly numerous blood vessels with spindle and hyperchromatic pleomorphic cells making up the bulk of the section but with moderate numbers of

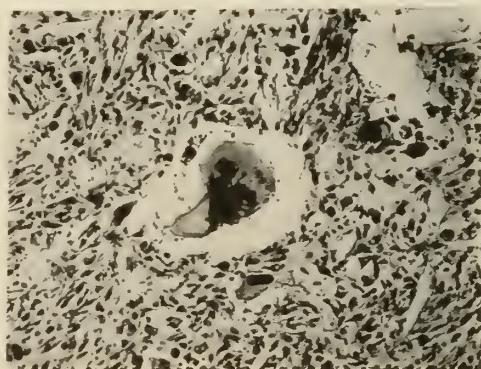


Fig. 3. Microphotograph of one area of the neoplasm.

osteoblastic cells present (Figure 3). In some of the sections there was a little osteoid inter-

cellular material but in most of them it was lacking.

Pathologic Diagnosis: Osteolytic bone sarcoma.

Postoperative Course: The patient made a good recovery. The temperature fell to normal or below, but the pulse ran between 90 and 120 per minute. The white blood cell count fell to 8,100 eleven days after the operation. The red blood cell count at that time was 2,600,000, with 9.2 grams of hemoglobin. Nine days later, however, the red cells had increased to 3,630,000 with 10.8 grams of hemoglobin, and at present the prognosis is favorable.

COMMENT

Bone sarcoma is generally recognized as a disease of younger individuals and this case serves to emphasize that it is also encountered in elderly people. The site and character of the lesion, as well as its roentgenologic and pathologic features, are typical of this group of tumors. A question which might arise is in regard to the fever and the leukocytosis. It is well known that in all forms of bone sarcoma these are evidences of systemic reaction to the presence of the neoplasm. The anemia, which was of the achromic type, was probably the result of the neoplasm's presence, since there was no other explanation for it. The fact that the anemia increased after the operation was thought to signify a bad prognosis. However, the improvement in the anemia three weeks after operation makes this doubtful.

GENERAL DISCUSSION

It has been estimated¹ that one of three cases of sarcoma in the human body is a bone sarcoma. In this country the incidence of bone sarcoma is about one to 100,000 of population. In England it is thought to be one to 75,000 of population. There are probably twice as many primary malignant bone tumors as benign giant cell tumors. Sex and social conditions have no influence as etiologic factors. The disease is primarily one of the young; and while no age is entirely free, the vast majority of tumors are encountered in patients between ten and twenty years of age, which is in the age of most active skeletal growth. Although any bone of the skeleton may be involved, the metaphyses of the long bones are the seats of predilection of osteogenic sarcoma. Thus, three-fourths of all cases arise in the lower extremities and over three-fourths of these arise in the region about the knee, whether in the tibia or femur.

Trauma seems to be of definite etiologic significance. In about one-fourth of the cases there

is a history of injury preceding the tumor. Paget's disease also precedes the sarcoma in about 15 per cent of the cases, and patients with this condition should be warned as to the likelihood of malignant changes. According to Geschickter and Copeland,² pathologic fractures occur in approximately one-half of all the cases of the osteolytic type of bone sarcoma. They state that the average duration of symptoms is slightly under one year prior to the initial treatment. The symptoms in their usual sequence are pain, tumor, limp, trauma, and fracture. It should be emphasized that osteogenic sarcoma is the most important malignant lesion in which pain precedes the tumefaction. Any severe, persistent pain of a long bone should make one consider osteogenic sarcoma.

The diagnosis is largely the roentgenologist's problem, but it also requires the cooperation of the clinician and pathologist. These lesions at times have distinctive roentgenologic pictures, yet at other times they are extremely difficult to interpret. Much of the improvement in the diagnosis of bone tumors, however, has been due to the roentgenologist's ability to differentiate the various lesions of the bone. Osteolytic bone sarcoma may be confused with a benign cyst of the bone, benign giant cell tumor, metastatic carcinoma of the bone, Ewing's sarcoma, or even with chronic osteomyelitis. Space will not permit a discussion of the x-ray differential diagnosis, but this will be found in the referred reading. It should be emphasized, however, that in all cases syphilis should be eliminated as a possible diagnosis and pulmonary metastases should be ruled out before operation.

The mainstay of treatment in sarcoma of the bone is radical surgery. Irradiation has some value but radical amputation is the preferred treatment. This should never be done if there is doubt as to the exact nature of the lesion, but in such a case a frozen section during the operation will clarify the diagnosis. The prognosis is bad, and in the osteolytic type of bone sarcoma probably not over 10 per cent of the patients survive five years. However, the prognosis may be improved if patients seek early medical advice. They will do this when they are taught the significance of painful swellings of the bone.

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STATE DEPARTMENT OF HEALTH



WHITE CHRISTMAS

C. K. McCARTHY, M.D.
Director
Division of Tuberculosis

Another year has passed—a year to be remembered through all the future.

The Christmas Seal, symbol of the fight against tuberculosis, is again a cheerful bit of color with which to adorn the holiday mail. It reminds us of the good old days, and one can easily imagine the cheerful jingle of the sleigh bells. The world certainly can use anything which is cheerful now when the bursting of bombs, the shrieking of shells and the whine of bullets are heard on every continent and on every ocean.

In the fight against tuberculosis, little noise, but nevertheless constant progress, is being made. The disease is gradually coming under control. Nature is combining her forces with those of science to combat this dread disease. The death rate has gradually decreased for the past forty years, which is a most gratifying record; but, analogous to the time of World War I, the rate is again showing a slight increase. Efforts must be increased, therefore, in order that the disease will not get out of control.

The Selective Service Act has presented an opportunity to examine vast numbers of men who, for the most part, are apparently well. However, many cases of tuberculosis have been found. Much good can be accomplished by the examination of the families of these men. The younger members of the household may be examined and there is an excellent chance of finding cases in an earlier stage than would be possible if we awaited symptoms. This work should be done through the family physician; however, the entrance into military service of so many physicians has made it a little difficult to accomplish this in the most desirable manner.

One cannot stress too much the value of early diagnosis of tuberculosis. We must not wait for cough and expectoration to draw attention to the

chest. In the tuberculin test a valuable weapon is at hand. Some men regard it as the most accurate test in the field of medicine, and it is increasing in popularity every year. It must also be remembered that in adult life a negative tuberculin reaction may be extremely valuable in the interpretation of chest shadows. The State Department of Health furnishes material for the intradermal test without charge.

The very important problem of health in industry comes to the fore in times such as these. Man-hours are of more importance right now than at any time in our history. The State Department of Health is prepared, through its Division of Industrial Hygiene, to assist the management of industries who institute a comprehensive program of industrial medicine. This can include examination of the chest of each employee by means of the microfilm. Persons who show abnormal shadows are advised to have conventional 14 by 17 inch films made in their local community.

The microfilm is also being used in some counties, with the approval of the respective county medical societies, for examination of the entire high school population. In this program, members of the entire family of a child whose chest shows primary tuberculosis are examined by the family physician. The family is tuberculin tested and those who react are x-rayed, either privately or at a conference held by the State Health Department and the Iowa Tuberculosis Association.

Let us therefore remember when we mail our Christmas cards and packages to place on each a Christmas Seal, knowing that the profits will be well and carefully spent to the end that tuberculosis work in Iowa can be carried on as in the past.

The State Department of Health takes this opportunity to thank the medical profession in Iowa for cooperation and help in carrying out the campaign against this dread disease.

**POOLED NORMAL HUMAN SERUM AND
PLASMA IN IOWA**

**Distribution of These Products in Hospitals
as of November, 1942**

In response to request from Colonel Wallace D. Hunt, Regional Medical Officer for Civilian Defense of the Seventh Service Command, and from Thomas A. Burcham, M.D., Chief of Emergency Medical Service for Civilian Defense in Iowa, information was assembled through the office of the State Health Commissioner, relative to the following: (1) the amount and distribution of pooled normal human serum as supplied to hospitals from the Serum Center of the Iowa State Department of Health; (2) hospitals which maintain blood plasma banks, with amounts of plasma on hand; and (3) the amount of plasma and location of hospitals which do not maintain a blood plasma bank but keep on hand one or more units of plasma, obtained in most instances from commercial companies. Data pertaining to blood plasma banks, plasma units and distribution were supplied through the courtesy of hospital superintendents and staff physicians in reply to a letter and questionnaire forwarded on September 25, 1942, from the office of Walter L. Bierring, M.D., State Health Commissioner.

PART I

Amount and Distribution of Pooled Normal Human Serum as Supplied to Hospitals from the Civilian Defense Serum and Plasma Bank, Serum Center, Iowa State Department of Health, as of November 13, 1942.

City	County	Physician or Hospital	Number of 250 cc. Units
Algona	Kossuth	Kossuth County	2
Allison	Butler	F. F. McKean, M.D.	2
Ames	Story	Iowa State College	4
Ames	Story	Mary Greeley	6
Boone	Boone	Boone County	4
Burlington	Des Moines	E. C. Sage, M.D.	4
Cedar Falls	Black Hawk	Sartori Memorial	4
Charles City	Floyd	Cedar Valley	4
Cherokee	Cherokee	Sioux Valley	4
Clarksville	Butler	E. M. Mark, M.D.	2
Council Bluffs	Pottawattamie	Jennie Edmundson Memorial	80
Davenport	Scott	Mercy	66
Davenport	Scott	St. Luke's	32
Decorah	Winneshiek	Decorah	4
Des Moines	Polk	Broadlawns	4
Des Moines	Polk	Iowa Lutheran	28
Des Moines	Polk	Iowa Methodist	20
Dubuque	Dubuque	Finley	4
Eldora	Hardin	Iowa Training School	4
Eldora	Hardin	Ivan T. Schultz, M.D.	2
Emmettsburg	Palo Alto	Emmettsburg	4
Fort Dodge	Webster	Lutheran	4
Fort Dodge	Webster	St. Joseph Mercy	2
Ft. Madison	Lee	Iowa State Penitentiary	4
Grinnell	Poweshiek	Grinnell Community	2
Hampton	Franklin	Hampton Clinic	4
Humboldt	Humboldt		
Iowa Falls	Hardin	Ellsworth Municipal	2
Jefferson	Greene	Greene County	4
Lake City	Calhoun	Davidson	2
Laurens	Pocahontas	Hovenden	2
Le Mars	Plymouth	Sacred Heart	2
Manchester	Delaware	Drs. Jones and Clark	4
New Hampton	Chickasaw	St. Joseph's	4
No. Buena Vista	Clayton	F. J. Bries, M.D.	2
Orange City	Sioux	E. B. Grossmann, M.D.	4
Pocahontas	Pocahontas	Harris	2
Red Oak	Montgomery	Murphy Memorial	4
Rock Rapids	Lyon	W. Vander Wilt	2
Sac City	Sac	L. B. Amick, M.D.	4
Sibley	Osceola	F. P. Winkler, M.D.	4

City	County	Physician or Hospital	Number of 250 cc. Units
Spencer	Clay	Community	4
Spirit Lake	Dickinson	Spirit Lake	2
Washington	Washington	Ruth E. Church, M.D.	4
Waverly	Bremer	L. D. Jay, M.D.	2
Sub Total		44	354
Serum Center—State Department of Health (November 13, 1942)		86	
Serum Center—Units in process (November 13, 1942)		30	
Total			470

PART II

Hospitals which Maintain Blood Plasma Banks, With Stated Amounts of Plasma on Hand, October-November, 1942.

City	County	Hospital	Number of 250 cc. Units
Cedar Rapids	Linn	Mercy	80-120
Clinton	Clinton	St. Joseph Mercy	12
Council Bluffs	Pottawattamie	Mercy	80
Des Moines	Polk	Mercy	22
Iowa City	Johnson	University	55-110
Ottumwa	Wapello	Ottumwa	25-30
Sioux City	Woodbury	St. Joseph	16-20
Sioux City	Woodbury	St. Vincent's	10
Waterloo	Black Hawk	Allen Memorial	15
Total		9	315-419

In addition to the hospitals listed above, blood plasma banks are being organized or planned in other cities, including:

City	County	Hospital
Dubuque	Dubuque	Mercy Hospital
Cedar Rapids	Linn	St. Luke's Methodist
Mason City	Cerro Gordo	
Washington	Washington	Washington County

The list which follows shows the amount of plasma and location of hospitals and physicians that do not maintain a blood plasma bank but keep on hand one or more units of plasma, obtained in most instances from commercial companies.

PART III

Plasma in Other Hospitals (October-November, 1942)

City	County	Hospital	Number of 250 cc. Units
Atlantic	Cass	Atlantic	2
Belmond	Wright	Belmond	2
Cedar Falls	Black Hawk	Sartori Memorial	1
Clarion	Wright	Clarion General	1
Cresco	Howard	St. Joseph Mercy	2
Eldora	Hardin	Eldora Memorial	2
Forest City	Winnebago	Irish	2-3
Hartley	O'Brien	Hand	1
Independence	Buchanan	Independence	2
Lake City	Calhoun	Davidson	1
Le Mars	Plymouth	Sacred Heart	5-8
Leon	Decatur	Decatur County	1
Laurens	Pocahontas	Hovenden	2
McGregor	Clayton	McGregor	1
Monticello	Jones	John McDonald	1
Nevada	Story	Iowa Sanitarium	2
Osceola	Clarke	Bates	2-3
Oskaloosa	Mahaska	Mercy	3-5
Shenandoah	Page	Hand Memorial	2
Sioux City	Woodbury	Lutheran	3-4
Sioux City	Woodbury	Methodist	5
Vinton	Benton	Virginia Gay	2
Waterloo	Black Hawk	Presbyterian	2
Waterloo	Black Hawk	St. Francis	12
West Union	Fayette	West Union Community	1
Williamsburg	Iowa	Miller	1
Total		26	61-69

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Vol. XXXII DECEMBER, 1942 No. 12

**PHYSICIANS' OBLIGATION IN GASOLINE
AND TIRE RATIONING**

Today, December 1, 1942, gasoline rationing goes into effect on a nationwide scale. Its purpose, as everyone knows, is to conserve the supply of vital materials possessed by the nation in order that there may be no lack of fighting equipment for the use of our forces wherever they may be. Thoughtful persons will keep this purpose uppermost in their minds and will willingly cooperate in both the spirit and letter of the Act. Unfortunately, there are always a few chiselers who place their own comforts and their own needs ahead of all other considerations, and who take the attitude that anything with which they can get by, as long as they aren't caught, is smart stuff. A particularly heavy responsibility rests upon physicians, who are to be granted the privilege of C books, to set an example for the rest of the community by adhering strictly to the provisions of the regulations which recognize the essential nature of medical work.

Mr. John R. Richards, Chief of the Gasoline Rationing Branch of the Office of Price Administration, has addressed an open letter to the members of the American Medical Association. It is reprinted in full, and with full assurance that the medical profession of America will continue to demonstrate its patriotism and its leadership in this instance as it has always done.

"In the East Coast Gasoline Rationing program, made necessary by the shortage of transportation facilities for petroleum products, the indispensability of your profession was recognized by its inclusion in the categories of persons eligible for preferred mileage, that is, necessary occupational mileage in excess of 470 miles a month. Now the Office of Price Administration has been or-

dered by Mr. William Jeffers to institute and administer a nationwide mileage rationing program for the express purpose of conserving our rubber-borne transportation. In framing the Regulations for the new program, your profession was one of the first to be provided for.

"If we are to carry out our double task of preventing a collapse of our military and civilian transportation, we must have the complete cooperation of those groups of persons whose driving is deemed essential to the war effort. Our immediate aim is to attain the 5,000 mile national mileage average set by the Baruch Report as the maximum possible in light of the dire rubber shortage. Our experience with the East Coast program tells us that the preferred categories use one-half of the gasoline consumed, though they constitute less than one-fourth of the total number of automobile operators. Clearly, then, the great savings of rubber on a nationwide scale must be made in the preferred categories.

"Under the Regulations, governing the mileage rationing program, physicians are eligible for preferred mileage if their essential occupational needs exceed 470 miles a month and if the mileage is needed for regularly rendering necessary professional services. Mileage traveled daily or periodically between home or lodging and a fixed place of work is not considered preferred. Physicians who conduct their practices in offices, as many specialists do, are not eligible for preferred mileage.

"Without question or hesitation, doctors have been and will be granted all the gasoline needed to carry out their professional work. We hope that they will regard their concrete symbol of their indispensability, the C book, as a moral obligation and not as a personal privilege. From another point of view, the C book is part of a doctor's equipment; it should not be used for anything but the work of humanity.

"When nationwide gasoline rationing begins, there are certain concrete things a doctor can do to live up to the high ethical standards set for him by his own profession:

"1. At the time of first issuance of rations, he can so carefully compute his necessary mileage as to make a B book adequate for his purposes though he might easily make out a case for a C book, which might be granted to him without question by his local War Price and Rationing Board eager to provide for physicians.

"2. In the computation of his mileage, he can religiously adhere to the provision of the Regulations, which makes 150 miles of his basic ration available for occupational purposes. Moreover,

he can help mightily in establishing the principles that only 90 miles of the basic ration are to be used for home necessary use and that there is no provision whatever in any ration for 'pleasure driving.'

"3. Conversely, if he should be granted a C book, he can return to the local board, at the end of the three months' period, all unused coupons accruing to him as a result of a quite natural overestimation of needs or overgenerous 'tailoring' by his board, instead of using such coupons for nonessential purposes. The moral effect of such an act on his fellow citizens will be incalculable.

"4. He can set an example by scrupulously observing the 35 mile speed limit, except in cases of emergency, in spite of the fact that doctors could easily 'get away with it.'

"5. Should he be assigned to a hospital, clinic or institution after a ration card for calling on his private practice has been issued, he can use public means of transportation at the price of personal inconvenience.

"6. He can refrain from any kind of driving whatever which might appear to be nonessential in the eyes of the public.

"Doctors are the leaders and molders of public opinion in their communities. If the average man has any reason to believe that the professional men whom he regards with great respect are indifferent or hostile to the mileage rationing program, it will be difficult, if not impossible, to make it effective. Conversely, if doctors as a group observe the letter and spirit of the Regulations, they will be a powerful force in making this absolutely mandatory war measure serve its purpose. We know that we can rely on the support of your profession, which has demonstrated its patriotism, ability and unselfishness at every opportunity.

"JOHN R. RICHARDS,

"Chief Gasoline Rationing Branch, Office of
Price Administration."

KENNY PRINCIPLES APPLICABLE TO CONDITIONS OTHER THAN POLIOMYELITIS

Miss Kenny's concept of muscle spasm, mental alienation of muscle and incoordination of muscle junction, together with the system of treatment she has advanced for overcoming this triad, have become rather widely accepted in America in relation to poliomyelitis. That these principles would be scrutinized minutely in order to determine their applicability in conditions other than poliomyelitis could be predicted without fear of contradiction. In fact, the field of physiotherapy is apt to undergo considerable revision in the next few years.

One of the first individuals to advocate the

application of the Kenny principles in conditions other than poliomyelitis is Major Vernon L. Hart of the Medical Corps of the Army of the United States. Major Hart states in an article in the November 21 issue of the *Journal of the American Medical Association* that the principles are definitely applicable in cases of injuries of the knee joint. Says Major Hart, "Following an injury to a knee joint one can demonstrate muscle spasm, mental alienation of muscle and incoordination of muscle function. These are the three cardinal attributes in the stages of poliomyelitis which Miss Kenny recognizes and treats, and she has demonstrated them to the satisfaction of the medical profession. If Sister Kenny was directed to examine and treat soldiers with internal derangements of the knee joint without the assistance of physicians, she would observe these three cardinal clinical findings as she did in her patients with poliomyelitis. She would treat what she found and the patients would recover with functional extremities because the integrity of the neuromuscular, vascular and gliding units would be preserved; deformity and disability would be prevented. Paralysis may be present in the patient with poliomyelitis and a torn semilunar cartilage may be present in the patient with a knee joint injury, but the syndrome of muscle spasm, mental alienation of muscle and incoordination of muscle function are the clinical features which exist in each. These three symptoms can be demonstrated, and they must be treated and relieved because they are the pathologic basis for deformity and disability. The torn cartilage or the ruptured ligaments may require subsequent surgical treatment, but the immediate therapeutic consideration is not surgical. A fractured patella or tibia may demand immediate surgical repair before the Kenny principles can be inaugurated. A fractured femur treated by skeletal traction is being neglected if mental alienation of muscle and incoordination of muscle function are not corrected during the weeks of skeletal traction."

The author goes on to describe the details of hot packing to overcome muscle spasm and the educational method employed to correct mental alienation of muscle. "I have been impressed," he states, "with the unusually high percentage of normal knees following this system of treatment and the extremely small number of patients with recurrence of disability. This program of treatment diminishes the original period of disability, eliminates the use of all plaster splints and other forms of mechanical appliances, reduces recurrent disability and greatly reduces the necessity of surgical correction of knee joint disability as compared with other methods of treatment that I have used."

VOLUNTEER NURSES AIDE CORPS*

Shortage of trained nursing personnel for civilian needs has already become an acute problem and will unquestionably become more acute in the months ahead as the enlistment of nurses in military services continues. Furthermore, schools of nursing are encountering difficulty in recruiting qualified persons in sufficient numbers to even approach future needs. This lack of sufficient trained nurses is a serious situation in our hospitals now, but in the event of a widespread epidemic of influenza such as was experienced during the last World War, or in case of other disasters, a major calamity would ensue. Obviously, something must be done to supplement the depleted trained nursing personnel, not only to maintain routine health standards but also to be prepared for future emergencies.

The American Red Cross and the Office of Civilian Defense have responded to this need by issuing a call for 100,000 women volunteers as Nurses Aides. It is visualized that these Aides can be taught in a relatively short time to perform many of the necessary routine hospital duties which will relieve the professional nurse for the more technical work for which she has had special training. The Volunteer Nurses Aid Corps originated in the last war, but new rulings and revisions were adopted in October 1941 to meet the present demands. The American Red Cross, through its chapters, undertakes the selection, enrollment, and instruction of volunteers. With the cooperation of the Office of Civilian Defense, an intensive eighty-hour training course has been set up. A qualified graduate nurse gives thirty-five hours of classroom work and the next forty-five hours are spent in supervised practice in hospital wards. Graduates then receive their caps and pins which, together with the blue uniforms and white blouses with the Red Cross OCD insignia on the left sleeve, make them full-fledged members of the Volunteer Nurses Aid Corps.

Volunteers in this Corps are American women between eighteen and fifty years of age who are physically fit and who have a high school education. They are willing to give a minimum 150 hours per year on duty in hospitals and health organizations. In the event of an emergency, they must be prepared to give generously of their time.

The question of interest to physicians, naturally, is just which services Aides are competent to carry out. This may be answered by saying that they do not give medications or treatments. They make beds, give baths, take temperatures and

pulses, and perform numerous other tasks of a nontechnical nature which add greatly to the comfort and morale of the patient. The object, of course, is to relieve the trained nurse so that her specialized skill may be used to the greatest possible extent for the greatest possible number of patients. When one considers that the supply of trained nurses for civilian needs may be reduced by one-half or even two-thirds, it becomes apparent that there is a real place for the Volunteer Nurses Aide and that she richly deserves all possible help and consideration from the medical profession.

Experience has shown that Nurses Aides themselves give devoted and enthusiastic service to their work. They feel they have received training which will be of help to them and their communities in later life, and that they are doing a job of real value in the war effort. Iowa needs a large group of these competent hard-working Nurses Aides. They will be amply rewarded by the satisfaction of knowing they are sharing in the most civilized of human endeavors—the relief of human suffering. As physicians, let's give them a helping and encouraging hand, because the day is coming when we will be mighty glad to have them on hand.

ANNUAL CONFERENCE OF SECRETARIES AND EDITORS

Each year the American Medical Association holds a conference in Chicago to which are invited the secretary and editor of each constituent state medical association. At this conference the important problems confronting the medical profession are discussed and an opportunity is given for questions and answers. Needless to say, such conferences can accomplish a great deal of good, and it is heartening to observe how many states send more representatives than the two whose expenses are paid, and how closely those representatives attend the discussions.

The 1942 meeting was held in Chicago November 20 and 21, and Iowa had six representatives present. The Friday meeting was devoted largely to the problems arising in connection with the war. Dr. Roger I. Lee, chairman of the Board of Trustees of the American Medical Association, called the meeting to order and welcomed it to Chicago. Colonel Fred W. Rankin, president of the American Medical Association, outlined some of the special matters which have arisen during the past year, and he was followed by Ross T. McIntire, Surgeon General of the United States Navy. Admiral McIntire explained the place of the reserve medical officer in the wartime setup

*The Journal expresses its thanks to the Red Cross Volunteer Nurses Aide Committee and Mrs. Julian M. Bruner, who has charge of their publicity, for the essential information in this editorial.

of the navy medical corps, telling how many were usually assigned to the different types of ships and how the injured were cared for on these ships. He said that one of the postwar problems was going to be that of specialization. Doctors who have been serving in the navy, caring for a wide variety of wounds as well as diseases, will go back into civil life with a different slant on medicine; they will not feel they can practice only one branch. He also mentioned the cost of medical care after the war and stated it was his belief that money will be scarce when the war is over and incomes lower. He felt that the medical profession should start thinking constructively about this problem now, and that unless we have something very sound to offer, we may have something shoved off on us. He also raised the question of how to redistribute physicians, how to get physicians to settle in certain sections of the country, and how to drain the surplus from the cities into deprived areas.

Dr. Frank H. Lahey, chairman of the Board of the Procurement and Assignment Service, was the next speaker. Dr. Lahey said that Procurement and Assignment may have been unduly modest and shy in carrying out its functions, particularly in view of recent criticism, but what it wanted was to do the job. He went into particulars in stressing the splendid cooperation the board had received from Mr. McNutt, the American Medical Association, the Army, Navy, Public Health Service, Selective Service, and other agencies. He paid great tribute to the county and district chairmen of Procurement and Assignment who have done the spade work, saying that they did an intelligent and good piece of work. The state chairmen have been able to rely on the information given them by the counties and districts and have cooperated 100 per cent.

Dr. Lahey next explained how the quotas had been worked out for each state and said that states providing more than their quota for 1942 would be given credit for 1943, and that states not reaching their quota in 1942 would be required to provide more in 1943. He said a meeting had been held recently with representatives of all branches of the government which needed physicians in order to determine the 1943 needs. At this meeting the ratio of physicians to men in service was set at 6.5 physicians per 1,000 men in the navy and air force, and it was felt the army would probably accept the same figure. The figure of one physician for each 1,500 civilians was thought to be satisfactory, and recruitment will be based on that decision. He also mentioned the problem of dislocating physicians and said

Procurement and Assignment was working with the problem now. He mentioned some of the difficulties involved, particularly that of licensure and state rights, and closed his talk with the statement that personality problems existed, of course, and always will, but personal conflicts are a luxury to be reserved for peace times.

Dr. John H. Fitzgibbon of Portland, Oregon, followed Dr. Lahey and explained in detail how Portland and Vancouver had surveyed existing medical and hospital facilities and had found that by certain changes and economies they could care for an increase in population from 350,000 to an expected 570,000. Immunization against smallpox, diphtheria and typhoid are to be done at once as the first step in the prevention of disease. Employees of the shipyards may enroll in the Oregon medical service plan; doctors will hold evening office hours; offices will be located in the new housing areas; and by reorganization it will be possible to care for the additional load without building more hospitals or bringing in more physicians.

The next speaker was General Hillman who spoke on the personnel problem of the Army. He explained how the reserve had been built up since 1918, and how the army had worked with Procurement and Assignment in calling doctors into service. He felt that Procurement and Assignment had been of inestimable value in providing physicians and preventing confusion and disruption. He next explained how every effort is made to fit doctors into the right niche, and that the Medical Administrative Corps is now using laymen to relieve the doctors of administrative detail and free them for medical service. He pointed out the danger to the supply of pre-medic students contained in the new draft law, and said the army is working on the problem of keeping a continuous flow of students into the medical schools.

Dr. James E. Paullin of Atlanta, president-elect of the American Medical Association, was the first speaker Friday afternoon. He mentioned the many branches which make up the American Medical Association and stressed the need for the active cooperation of all. He discussed the redistribution of physicians, saying he thought most of the problems should be considered at a state level; basically the fundamental problems are the same but the technic of solution may be different. He also mentioned the difficulties such as licensure and state rights, and suggested temporary licenses as a possible solution. Each state should be able to work out some arrangement, remembering that we are at war and that we must not stand too

firmly on state rights to the hindrance of the national effort.

Dr. Paullin was followed by Dr. Thomas Parran, Surgeon General of the United States Public Health Service, who explained how his agency was cooperating with state and local public health agencies. The objectives are to strengthen and develop industrial hygiene; to aid in controlling venereal disease; to operate malaria control programs around mushroom centers; and to provide the medical staff of OCD base hospitals set up in target areas. He stressed the need for redistribution of physicians, but was opposed to legislation, believing it should be done on a voluntary basis, and mentioned some of the things which might be done to accomplish it.

Colonel Leonard G. Rowntree, chief of the Medical Division of the Selective Service System, spoke on the medical needs of the war and the selective service system. He said war has made demands on medicine unheard of before, and listed four branches: military medicine, public health and industrial medicine, research medicine, and civil practice. He praised medical leadership, and said medicine had more to offer to the war effort than any other profession. He discussed physical standards and methods of examination, gave figures on rejections, discussed rehabilitation programs, the need for deferment of medical students, and other allied problems.

Dr. Creighton Barker, secretary of the Connecticut State Medical Society, discussed the problem of physicians for civilians. He said the secretary of a state association gets a stream of information about medical care and the like in his state, much of which may not stand critical analysis, but which does give him a personal, intelligible knowledge of conditions and enables him to function more efficiently in his office. He discussed briefly the work of the past year in obtaining doctors for the armed forces and then discussed medical care for civilians. He said very few people think it is the government's job to provide their medical care; they look for this to the medical profession. He brought out the point that the state secretary knows where there is a real shortage of physicians; that he usually knows some doctors who want to relocate; and that he can learn about new licensees from the medical licensure boards. All of these can be used to fill the need and, in addition, doctors can be encouraged to care for two areas by splitting their practice. Better utilization of the doctor's time and energy will help also, and the public should be educated regarding its responsibilities along this line.

Dr. Walter F. Donaldson of Pittsburgh spoke on the function of the War Participation Committee. He explained that it was an outgrowth or outcome of the Medical Preparedness Committee which was formed in 1940 and dismissed in 1942. The duty of the new committee is to keep in close touch with policies affecting the quality and efficiency of medical services for the armed forces and industry. Particular emphasis is necessary in urging industrial health programs for the smaller plants. Dr. Donaldson complimented the Council on Industrial Health of the American Medical Association for its cooperative and helpful spirit and the vast amount of work it has done in this field. He said medicine should accept Mr. McNutt's challenge and learn something about the new problems which are developing in modern industry. If we are to hold the respect of the public we must show that we are alert to the problems. The men in service are looking to us to safeguard the practice of medicine. We must not be static; we must do our part in the world as it exists today.

Dr. Harold M. Diehl of Minneapolis was the last speaker of the afternoon. He explained a little more about the problem of dislocation, saying the state medical societies should investigate the need for additional physicians, the possible need for public health services which would alleviate the situation somewhat, and then plan how to provide the necessary personnel. He said the national Procurement and Assignment office would send state chairmen lists of internes and physicians physically disqualified for medical service who might be utilized in needy areas.

At the Saturday morning session Mr. A. M. Simons of the American Medical Association discussed medical service plans of the Farm Security Administration. He explained in detail the difference between the first plans of the FSA and the ones in effect now, stating that where dissatisfaction existed it was usually because of experience with earlier plans. All groups seemed to agree that before the plans were formed, the farm families affected were not receiving adequate medical care, and the physicians were not receiving adequate compensation. A higher economic level has made some of the plans unnecessary, but there is a new program to give medical care to farm families without any income limit. This may expand to include the major part of the farm population. No program will be inaugurated without the consent of the county medical society. The extent of coverage is somewhat limited; states having medical service plans have incorporated the FSA group into their plan successfully. Mr.

Simons stressed the need for a clear understanding of the contract coverage, and the danger in trying to include too much.

Brigadier General David Grant of the United States Air Force was the next speaker and gave a clear picture of the aims of the air force in its medical program. He stressed the need for a high esprit de corps and said the doctors would be better physicians for civilians when they return. Every effort is made to fit them into the right niche, and they are urged to associate with local medical groups. Global medicine is a new and necessary development because of the far flung fields of operation. General Grant also told of the inpatient occupational therapy program that has been instituted which has already cut the sick report 25 per cent and has caused a great improvement in the mental and physical health of the injured men.

Dr. James C. McCann, president of Massachusetts Medical Service, presented a detailed report of the manner in which Massachusetts approached the problem of establishing its medical service plan. He said the basic problem was whether the physicians were ready to support the plan, a statement which rings true to us. Dr. McCann's talk covered many points and would serve as an excellent guide to states getting ready to formulate such a plan. It was discussed by representatives from Michigan, California, Pennsylvania, New Jersey, and Missouri.

The final paper of the conference was given by Dr. Carl M. Peterson, secretary of the Council on Industrial Health of the American Medical Association. Dr. Peterson discussed recent development in industrial health activities, and his paper bore out Dr. Donaldson's statement of the Council's excellent work in this field. He stressed the need for industrial health programs to keep the war effort at its highest efficiency, and said we must make every job safe, healthful and productive. Research is still necessary, but dissemination of available information would help in solving many problems. The Council is going to aid in providing training centers for industrial physicians, for which three weeks should be the minimum training period. He urged that county medical societies recognize the problem and co-operate with industry in keeping the workers at a high level of efficiency, and offered the services of the Council in providing outlines of procedure.

The conference adjourned at one o'clock Saturday afternoon after giving a vote of thanks to the American Medical Association and the speakers for the excellent program.

CHANGES IN THE BOARD OF DIRECTORS OF HOSPITAL SERVICE, INC., OF IOWA

Mr. Joseph F. Rosenfield, Des Moines attorney who is treasurer of Iowa Methodist Hospital, has been elected president of the board of Hospital Service, Inc., of Iowa, to succeed Mr. Paul R. Hanson. Dr. Martin I. Olsen, medical director of the Central Life Assurance Society, was elected to the board to succeed Dr. Donald H. Kast, and was made vice president of the board to fill the vacancy created by Mr. Rosenfield's election to the presidency. Mr. Rosenfield and Dr. Olsen also were elected to the executive committee of Hospital Service, Inc.

Mr. Hanson, former superintendent of Iowa Lutheran Hospital, now is a first lieutenant in the medical administrative corps of the United States forces, while Dr. Kast is a captain in the medical corps. Mr. Charles Bryant, president of The Morris Plan Company, will take Mr. Hanson's place on the board.

Members of the executive committee, in addition to Mr. Rosenfield and Dr. Olsen, are: Mr. Paul G. Norris, editor of the *Times-Republican*, Marshalltown; Mr. C. A. Mangelsdorf, Rock Island Bank and Trust Company; and Mr. James D. Brien, attorney, Des Moines.

PREVALENCE OF DISEASE

Disease	Oct. '42	Sept. '42	Oct. '41	Most Cases Reported From
Diphtheria	11	45	13	Woodbury, Wapello
Scarlet Fever	174	96	177	Polk, Scott, Woodbury
Typhoid Fever	4	6	15	Floyd, Hamilton, Monroe, Scott
Smallpox	5	0	1	Clarke, Woodbury
Measles	55	33	74	Polk, Woodbury, Washington
Whooping Cough	84	80	98	Dubuque, Dallas, Des Moines, Linn, Washington
Brucellosis	25	40	52	For the State
Chickenpox	90	12	100	Woodbury, Dubuque
German Measles	4	1	2	Guthrie, Polk, Webster, Winnebago
Influenza	12	1	13	Mitchell, Boone, Clarke, Jasper, Woodbury
Malaria	1	0	1	Dubuque
Mumps	95	58	84	Greene, Humboldt, Story
Pneumonia	43	34	72	Clinton
Poliomyelitis	16	20	9	Woodbury
Tuberculosis	73	114	56	Woodbury, Polk
Gonorrhea	156	162	149	For the State
Syphilis	274	214	220	For the State

CHANGE OF ADDRESS

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Gnawing at America's Productive Power*

PAUL DE KRUIF

In today's world so somber with lies, bloodshed and fear of death, there are still men who dare to draw blueprints for an honest, strong, gentle, laughing mankind of the future.

What has given them courage for such planning has been victory like that partly won against tuberculosis. Now the backs of all death fighters—not excepting those against the white plague—are to the wall. The call is for more death, and more; and we are all too likely to forget that, to kill our enemies efficiently, we cannot relax our fight for life. This is made especially plain by the condition of our battle against tuberculosis.

This year bids fair to find our vaunted national conquest of the disease at a standstill for the first time since World War I. The sinister sickness is beginning to flame high again. It gnaws at the vitals of America's productive power. It kills more and more Americans under the new strain of work in defense of our nation's life. The year 1940 saw an upsurge of the tuberculosis death rate in many of our leading cities. What may happen if we relax our war against this form of mass murder is shown by ominous warnings from across the ocean. In 1939, England, Wales and Scotland were pretty well satisfied with only 29,000 annual deaths. Then came their strain of all-out war production effort. The white plague's toll in 1941 was well up in the 30,000's on that embattled island.

Here is the exquisite manner in which the white death pounces first of all on those under strain of the fight for national existence—it is shown by the fact that against tuberculosis the efforts of our British cousins have failed. This is one sickness where deaths show an upsurge. Even deaths by bombing have been curbed. England is a healthier nation than it was before the war began—healthier, in spite of all its dislocations and deprivations—excepting for tuberculosis.

That the strain of war production does not itself mean the inevitable return of the white plague is proved by the brilliant success of Detroit's fight against it. In that city, long before Pearl Harbor, the strain of industrial production against the world's would-be destroyers was already intense. In Detroit the conditions of life are lovely—for the tuberculosis microbe. Yet here the curve of the white death is going steadily downward, in spite of housing conditions that are infamous, and are not fit for dogs, much less humans.

Detroit has driven its death rate almost down to that of the nation. How has the city taken the lead in the nation's tuberculosis fight? By doing what *could* be done in every city and locality, every state in our country. Its men against death have no secret weapon. But, long ago, by the end of the 1920's, Detroit citizens saw to it that there were ample beds to house the tuberculous sick. Then its physicians and public health men organized to find those infected. And, having found them, by mass use of every form of active treatment including the most modern, they began an unprecedented mass-curing of tuberculosis on the simple and absolutely sound idea that a

cured man cannot give the disease to others.

If Detroit had any special—if not secret—weapon at all, that weapon was money for the death fight. It is the money, given so ungrudgingly by millions of Americans, since 1907, to the Christmas Seal Campaign of the National Tuberculosis Association, that has been the most powerful single factor in our half-successful fight against the white terror.

This year, with the grim need for us to keep our men on the industrial front in top physical condition, and with their peril from tuberculosis greater because of the strain under which they work, it is especially important that all of us do our utmost, buying Christmas Seals with every spare nickel, dime and dollar.



*From the National Tuberculosis Association.

"Upgrading" of Medical Services

The address, presented by the Honorable Paul V. McNutt, Chairman of the War Manpower Commission, before the American Hospital Association War Conference banquet in St. Louis on October 15, 1942, is reprinted below because it contains much of interest to the medical profession. Although the article is long, we feel it is of sufficient value to print in its entirety and believe every physician will find it worth his time to read it from beginning to end.

"Last year, about one in every eleven Americans entered a hospital as a bed patient. There is every indication that there has been no let-up in these demands for hospital service. The fact that our hospitals have met, and are continuing to meet such demands despite large staff losses, is no miracle. It is merely the impossible. The impossible no longer exists. During the past ten months we have scrapped the first syllable. 'Impossible' in the easy days of peace was defined in terms of limitations upon staff time and hospital space. The possible was a world of optimum professional standards relating to manpower and equipment.

"You are well prepared for this revolution. Even in peace the hospitals, the doctors, the nurses and the technicians often did the impossible. Epidemics and disaster struck. And when they struck the shock troops of medicine and all the health facilities of the community met them and beat them back.

"You face today greater problems of personnel, service, finance, and public relations than ever before. But let me remind you that before another year of war is over we may look back to this day as one of comparative ease and plenty. America has rolled up its sleeves this year and has swung some very hard and telling blows. But 1943 should find us in the fight all the way. The demands ahead of us are urgent and unpredictable. They must be met with every ounce of our will to win.

"Some people have said that they will be only too glad to pitch in and help as soon as there is an 'emergency.' Not long ago our Subcommittee on Nursing told me of the case of a group of seventeen retired nurses who took a refresher course to equip them for wartime service on the home front. But only two of those seventeen went back to work. 'We are ready,' they said, 'We will serve when the need is urgent—when the bombs begin to fall.' The need is urgent now. The emergency is here. We have been bombed—not by four-ton block-busters and incendiaries—we have been bombed by circumstances. We cannot wait for smashed lives and smashed buildings to declare an emergency, because today that emergency stands shouting on every street corner in America and every crossroad in the world.

"Early in June it was my hard duty to report to the American Medical Association a serious lag in the recruitment of doctors. That was a hard duty

because the medical profession had been extremely farsighted in charting ways to meet the medical manpower requirements of America at war. The Procurement and Assignment Service of the War Manpower Commission closely followed the profession's own blueprint for meeting military needs and at the same time providing a fair distribution of physicians, dentists and veterinarians for civilian protection. But the facts required me to report vigorously, and I did.

"On June 1 only 39 per cent of the physicians needed in 1942 had entered active military duty. I stated then that unless the armed services got the physicians they needed the Procurement and Assignment Service, or any other type of voluntary recruitment and placement, would certainly fail. Today I wish to pay tribute to the profession and to the first year of operation of the Procurement and Assignment Service. On August 1, 70 per cent of the physicians needed for the entire year of 1942 had entered active service. On September 1 the figure had reached 85 per cent. I am today able to announce that 95 per cent of all the physicians needed for the armed forces in 1942 have been recruited. The objectives for 1942 will be reached ahead of schedule. That is a tribute to the medical professions. They have done a great job.

"It is necessary, however, to point out that not every state has met its quota. Some states have gone so far beyond them that further recruitment would threaten minimum civilian needs. Five states—New York, Pennsylvania, Illinois, Massachusetts, and Colorado—still lag much too far behind.

"The medical profession, indeed, has made a splendid record, and one that is in keeping with the fine tradition of service which it has always had. Once the need of our military and naval services was known and the administrative procedures had been organized to handle recruitment, the doctors indicated their willingness and eagerness to serve. At this time, I wish to congratulate the medical profession on its remarkable recruitment achievement and also on its genuine and unselfish cooperation with both military and non-military governmental agencies.

"How shall the hospitals make their curtailed staffs go farthest in meeting their expanded responsibilities? In industry we have a term called 'upgrading.' It is a basic part of the War Manpower Commission's objective in obtaining the full utilization of every worker in every plant every hour of the day. Job analysts discovered, for example, that a skilled craftsman—a machinist, a die cutter or a pattern maker—does in a normal day's work many things that do not require his best and highest skill. If the job he had could be broken down so that less-skilled workers would do the simpler things under skilled supervision, the high training of the craftsman could be multiplied many times.

"That is a principle which you have applied in planning for the best use of nurses. Nursing auxiliaries and aides are being recruited and trained. In the hospitals and in the homes they relieve the skilled nurse for skilled service which only she can do. We must go farther in that direction. We must utilize 100 per cent of the medical skill and training within our hospitals for 100 per cent medical needs. Internes will have to take on new responsibility for bedside care. They perhaps will have to devote less time to the laboratory and to the desk. Wherever possible non-medical work must be transferred to non-medical personnel. Every trained man and woman must be used at top skill every hour of his or her working day. You will have to do that if you are to release enough nurses for military duty.

"Three thousand nurses a month! More than one hundred nurses every day, seven days a week. That is the demand the armed forces are making upon the nursing profession of America. It is a demand that must and shall be met. Military needs come first. And it is by 'upgrading' that you can meet that drain upon your usual manpower. A variety of suggestions have been made and are being studied—suggestions which would shorten the nursing course. In wartime such acceleration will be necessary. And it will be you—the directors of schools of nursing, the hospital staffs and the hospital administrators—upon whom will rest the responsibility to make these changes effective. Your leadership and ingenuity will show the way.

"But we must look not only to current recruitment. We must look ahead to our supply of nurses in 1944 and 1946 and 1948. Our student nurse recruitment program aimed at an enrollment of fifty-five thousand during the year beginning July 1, 1942. The combined summer and autumn enrollment of thirty-six thousand students still leaves nineteen thousand blue-and-white student uniforms to be filled during the spring of 1943.

"Today any school of nursing affiliated with a hospital having a daily average of one hundred or more patients may apply to the United States Public Health Service for Federal funds for scholarships for qualified students. These scholarships cover tuition and other entrance fees. It is of fundamental importance that we get the best candidates for our nursing schools—and all of the best candidates. No qualified young woman should be debarred from entering a school of nursing because of lack of funds.

"There must be an even greater extension of auxiliary nursing services. Thirty thousand volunteer aides are already doing a superlative job of handling the hundred and one important tasks that keep a hospital running. Ten thousand more are now in training. Let us remember, however, that fundamentally these aides are not meant to take the place of paid workers. Their volunteer services must be over and above the solid core of staff personnel which, after all, makes up the backbone of our hospitals. But beyond building up auxiliary serv-

ices and extending the effectiveness of his staff, the hospital superintendent must learn to say 'no.'

"Private duty nursing and other forms of luxury nursing must be curtailed if we are to bridge the gap between the nurses available and the nurses needed. No longer are we dealing with matters which are at the discretion of patients—or even at individual doctors. We are dealing with community needs and community responsibilities. It is the hospital superintendent who is in a position to see this medical manpower problem as a whole. It is his responsibility to take an aggressive stand to insure the wisest use of his total personnel. He must take a community view of his hospital.

"Do not interpret what I say as suggesting that you really have all the facilities you need and that courage alone will solve them. With all your courage you will still be short of meeting your problem as you would like to meet it. But MacArthur in Australia is short too—short of the things he needs to roll the Japanese back into the sea from which they came. Eisenhower, mapping the strategy of a second front, which will some day destroy the Nazi might, is short too, and it is the lesson of war that MacArthur and Eisenhower will week by week and month by month get more and more—and you will get less and less.

"In many of the four hundred critical industrial and military mobilization areas recently surveyed by the United States Public Health Service, with the considerable aid of this Association's members, it was found that the shortage of doctors and hospital facilities had reached alarming proportions. Many of our war community areas have but one doctor for every three thousand, or four thousand, or five thousand people. There are at this moment vital war production centers in which thousands of families have little or no medical service nearby.

"A moment ago I said that we had been bombed by circumstances. I would like to extend that idea further to say that we also have been undergoing a kind of evacuation in reverse. We have 'evacuated' our countryside into areas of war production. As the population skyrockets upward in these areas, the ratio of physicians to population often spirals downward, either because no additional physicians have come into these areas or because too many who were there have joined the armed forces. More and more, hospitals must take on the growing load—both of hospital care and out-patient service.

"No discussion of hospital shortages would be complete without mentioning the shortages of internes. Some hospitals have appointed additional internes to make up for the lack of resident physicians. So far as internes are concerned, training and supervision make up priority number one. Unfortunately, the ability to attract large numbers of internes does not necessarily guarantee that a hospital will provide better training, especially with a depleted visiting staff. Nor does that ability guarantee that the interne's services will be of the most value to the community and to the

country. There are not enough graduates to provide all accredited hospitals with internes. Your Association, the medical profession, and your Government therefore agree that all hospitals must cooperate in an equitable distribution of internes by limiting their appointments to minimum needs.

"Many hospitals, however, are in communities which have less acute shortages of doctors than the new war areas. These hospitals will have to get along, for the duration, with a drastically reduced number of physicians—many fewer, in fact, than have been accustomed to serve them during peace times. I would like to commend many of our hospitals who have already recognized this fact. Their patriotic willingness to cooperate fully is but one of their more recent demonstrations of self-denial. Their application of the profound oath chiseled into centuries of medical practice by Hippocrates sets an example for all their fellow countrymen.

"Several hospitals have created space in which physicians may see their patients. Perhaps the provision of extra clinics along these lines will find increasing usage and support. A much larger proportion than usual of the physicians remaining for civilian service will be men in the middle or later years of life. Everything possible must be done to make the time of these physicians count for the maximum of service to patients. Every half hour of professional service must now do an hour's work. Doctors in some communities are considering whether, before the winter is out, they may not have to pool and district their home visiting and to organize their office hours on some cooperative plan. Hospitals, through their organized staffs, their material facilities, and their community prestige, should play an important, perhaps even a central part, in working out such proposals with physicians.

"In a very definite sense, civilian health has become military health. Khaki and blue denim are cut from the same bolt of cloth in this total war. The millions of men and women who live and work in the four hundred war industry areas cannot tell when or whom sickness will strike. Last year American workers lost close to one-half billion working days because of sickness and accidents. Many yardsticks have been used to measure that staggering amount of lost time. Lives lost and broken have been one yardstick; empty pay envelopes another. But today we use the all-important measurement of tanks that were not built and bombers that remained mere blueprints. In total war workers must be fit—and kept fit. The infantry of industry needs medical care and needs it badly.

"I am no prophet, but this much I can say: if our country takes on the responsibility of moving war workers from their present positions to the critical jobs where they are needed most, then our country will accept the parallel responsibility of maintaining the health security of those men and women and their families. Judged by the pipe-and-

slippers attitude of peacetime, we cannot ask a man or woman with an essential war skill to take this job or that. Judged by the cold steel and hot fury of total war, we may have to tell him just that. The day should not be long forthcoming when every American will be doing the war work he can do best where his country needs him most.

"The Procurement and Assignment Service of the War Manpower Commission has already accepted the responsibility for allocating medical manpower. It must, therefore, know the needs of the civilian population for medical service. In the Public Health Service of the Federal Security Agency and the Children's Bureau, steps are being taken to ascertain those needs and to meet them. These essential civilian needs must be met as surely as the military needs are now being met.

"These problems do not stop at state lines. They are as big as the nation—big as the war itself. The Federal government, therefore, has a definite responsibility to cooperate with the states in meeting these needs by providing financial and technical assistance whenever necessary. All across the broad face of America we have seen small towns become big towns overnight. Big towns have become boom towns. The medical and nursing professions have the great responsibility of offering their services for these communities which need their help so desperately. New hospitals are being built, existing hospitals are expanding with funds provided by the Lanham Act.

"Unfortunately, the onset of war brought necessary restrictions on building materials which temporarily put the brakes on hospital and health center construction. Many approved projects—approved in peace and reconsidered during war—have now been redesigned to use the barest possible minimum of critical materials. Almost thirteen million dollars worth of hospital and health center construction is nearing completion, or has already been finished. Now that the twin problems of new design and flow of materials have been ironed out, I look forward to an accelerating hospital construction program. These hospitals, too, I might add, will have to be staffed and equipped.

"Even as the Lanham Act was being passed America was taking control of essential materials. And what the Lanham Act gave, war priorities in some measure took away. As our military demands have increased, military demands have become tighter. Planes, guns, tanks, and ships compete with sterilizers and x-ray machines and a hundred other items of equipment that make the modern hospital what it is. In addition to domestic needs, our commitments under lend-lease take heavy toll of the equipment that is produced. I can offer you no special hope for relief from equipment shortage. You have to face the paradox of producing more and more service with less and less equipment. You have to make old equipment do. You will perhaps have to resort to equipment which in other days you have considered obsolete. You

(Continued on page 569)

Contributors of Old Medical Instruments

Dr. Joseph Peter Hoguet, medical director of the Medical and Surgical Relief Committee of America, has written to express the thanks of the Committee for the collection of surgical instruments which has been assembled in Iowa. He states that at the present time the need for them is very great; and everyone who has contributed may know that he has helped alleviate a shortage in vital medical instruments.

Over two hundred physicians in Iowa have sent in old instruments for this cause; in addition there have been contributions from several hospitals and from some doctors outside of Iowa. The State Medical Society is grateful to everyone who has helped in this program, and extends its thanks to the persons and organizations listed below:

Ackerman, Emma M., Sioux City	Hamilton, Cecil V., Garner	New Hampton Polyclinic, New Hampton
Agnew, Fred F., Independence	Hamstreet, Wilbur E., Titonka	Nicoll, David T., Mitchellville
Arent, Asa S., Humboldt	Hanchett, W. McKiernan, Council Bluffs	Nielson, Arthur L., Harlan
Armstrong, Max A., Newell	Hansen, Niels M., Des Moines	Noble, Earl H., Clemons
Armstrong, Robert B., Ida Grove	Hayne, Mrs. Willard W., Paullina	Noble, Nelle S., Des Moines
Ashby, Atchison A., Sioux City	Heilman, Ernest S., Ida Grove	Oggel, Herman D., Maurice
Atchison, Topeka and Santa Fe Hospital.	Henely, Edmund, Nora Springs	O'Leary, Francis B., George
Fort Madison	Hill, James C., Newton	Olson, Russell L., Northwood
Ayers, Chester A., Lorimor	Honke, Edward M., Sioux City	Parker, Edward S., Ida Grove
Barnett, Sylvester W., Cedar Falls	Hooper, Lester E., Indianola	Parker, James D., Fayette
Bassett, Mrs. L. A., Boone	Horton, Vincent J., Calmar	Parker, Robert L., Des Moines
Bates, Ernest G., Aurelia	Hovenden, John H., Laurens	Parsons, Harry C., Grinnell
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Benfer, Merrill M., Davenport	Huston, Samuel W., Mt. Pleasant	Payne, Rosewell H., Exira
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Bessmer, William G., Davenport	Irish, Thomas J., Forest City	Pfannebecker, William, Sigourney
Beyer, Arthur E., Guttenberg	Jackson, James M., Jefferson	Phillips, Isaac H., Missouri Valley
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Boice, Clyde A., Washington	Jeffries, Roy R., Waukon	Pierson, Lawrence E., Sioux City
Bowers, Henry W., Nevada	Jenkinson, Harry R., Iowa City	Pitts, S. O., Ogallala, Nebraska
Bowie, Louis L., Marshalltown	Johnson, J. A. William, Newton	Powell, Burke, Albion
Bradley, Carl L., Newhall	Johnson, Jonathan, Alden	Price, Alfred S., Des Moines
Brown, Mr. T. C., Montezuma	Jones, Cecil C., Des Moines	Ravitts, Joseph L., Montezuma
Brunner, Walter J., Akron	Jones, Charles L., Gilmore City	Raw, Elmer J., Pierson
Bullock, Alfred H., Cushing	Jones, Jesse I., Manchester	Roberts, Francis L., Spirit Lake
Burroughs, Mrs. J. J., Albion	Jongewaard, Albert J., Jefferson	Roberts, Francis M., Knoxville
Bursheim, Peder J., Exira	Jongewaard, Jeannette, Jefferson	Rodemeyer, Frederick H., Sheffield
Butterfield, Edwin J., Dallas Center	Judd, Addison L., Kanawha	Roder, Carl F., Dumont
Butterfield, Elwyn T., Dallas Center	Keeney, George H., Mallard	Russ, Jesse E., Rake
Calbreath, Lloyd B., Humeston	Keith, Mrs. John J., Marion	St. Joseph Mercy Hospital, Waverly
Carlile, Amos W., Manning	Keohne, Mr. C. O., Winterset	St. Onge, Joseph A., Sioux City
Carroll Clinic, Carroll	Kepler, Earl C., Greene	Samuelson, Carl A., Sheldon
Carryer, Carl H., Des Moines	Kerr, Johnston H., Akron	Schaefer, Paul H., Burlington
Cedar Valley Hospital, Charles City	Kiesling, Harry F., Lehigh	Schiff, Joseph, Anita
Chenoweth, Charles E., Mason City	Kooiker, Herman J., Milford	Schreiner, Charles A., Ollie
Childs, Ratford F., Audubon	Kribs, Frank J., Elkport	Schultz, Walter H., Schleswig
Chittum, John H., Wapello	Lamb, Harry H., Davenport	Seller, Raymond A., Blairstown
Christensen, Miss Arline, Audubon	Lamb, Jane, Memorial Hospital, Clinton	Shane, Robert S., Des Moines
Clapsaddle, John G., Burt	Lapsley, Robert M., Keokuk	Shaw, Ernest E., Indianola
Clark, Frank H., Clarinda	Larson, Lester E., Decorah	Shellito, Amos G., Independence
Conaway, Aaron C., Marshalltown	Lee, W. H., Powell, Wyoming	Sherman, Richard C., Farley
Cook, Clarence P., Des Moines	Lessenger, Ernest J., New London	Sigworth, Fred B., Anamosa
Cook, L. W., (D.V.M.) Montezuma	Lindsay, Vern T., Glidden	Smith, Arthur F., Manning
Cooper, Clark N., Waterloo	Lohr, Phillips E., Churdan	Spirit Lake Hospital, Spirit Lake
Cooper, Thaddeus C., Ogden	Longworth, Wallace H., Boone	Stanford, Mr. L. E., Montezuma
Courshon, Benjamin, Sioux City	Mace, R. M., (D. O.) Fort Dodge	Staudt, Alfred J., Waterloo
Crane, Wendell P., Holstein	Mark, Edward M., Clarksville	Steinle, George H., Burlington
Cretzmeyer, Charles H., Algona	Marshalltown Medical and Surgical Clinic,	Sternberg, Walter A., Mt. Pleasant
Crew, William F., Greenfield	Marshalltown	Stevens, Mr. M. O., Riverside
Daily, Milton, Sioux City	Matheron, John H., Des Moines	Stevenson, Eber F., Waterloo
Darrow, Mrs. F. L., Columbus Junction	Mattison, George, Jr., Akron	Stewart, Alexander P., Inwood
Daut, Walter W., Muscatine	Maxfield, F. M., (D.V.M.) Gilman	Stoakes, Charles S., Lime Springs
Davis, Mr. F. L., Columbus Junction	May, George A., Des Moines	Studebaker, John F., Fort Dodge
Deering, Albert B., Boone	McClintock, John T., Iowa City	Suchomel, Thomas F., Cedar Rapids
Down, Howard I., Sioux City	McConaughay, James T., Mt. Pleasant	Thein, Garfield M., Celwein
Dunn, Mr. C., Van Meter	McCreery, John W., Whittemore	Thomas, William H., McGregor
Dunkelberg, Elmer I., Waterloo	McDonald, C. F., (D.V.M.) Lorimor	Thompson, Howard E., Dubuque
Dunlap, Wallace A., Des Moines	McDowall, Gilbert T., Gladbrook	Thornton, Thomas F., Waterloo
Egan, Thomas J., Bancroft	McGrath, William J., Elkader	Thorson, John A., Dubuque
Elliott, William J., Dawson	McKean, Alexander C., Ladora	Tompkins, Earle D., Clariion
Evans, William I., Sac City	McKean, Frank F., Allison	VanCleave, Mr. S., Montezuma
Fallows, Howard D., Mason City	McManus, Joseph P., Graettinger	Vander Muelen, Herman C., Pella
Farr, E., (D.V.M.) Montezuma	McNaughton, Luther D., Eagle Grove	Vollmer, Karl, Davenport
Fox, Charles I., Pella	Mead, Frank N., Cedar Falls	Walker, Herbert P., Clariion
Gelman, James J., Hospers	Mercer, Clifford D., West Union	Wallace, Robert M., Algona
Ganoe, James O., Ogden	Meyers, S. R., (D.V.M.) Mountain Lake,	Walston, Edwin B., Des Moines
Gerken, James F., Waterloo	Minnesota	Ware, Matt, West Branch
Gibson, Chelsea D., Lake View	Miller, Lawrence A., North English	Warner, Miss K., Dayton
Giffillan, George W., Bloomfield	Mills, Ernest M., Le Grand	Watters, George H., Des Moines
Glasscock, Thomas J., Hawarden	Mills, Frank W., Ottumwa	Wells, Mr. Ralph, Montezuma
Goodenow, Sidney B., Colo	Missman, Walter F., Klemme	Weston, Burton R., Mason City
Gould, Isaac L., Kellogg	Mitchell, Claire H., Indianola	Wild, Mr. E. B., Oskaloosa
Greenleaf, William S., Atlantic	Moon, Mrs. Roy, Attica	Williams, Edward B., Montezuma
Griffith, Mr. Bush, Montezuma	Moore, Harris C., Martelle	Wilson, Frederic L., Sioux City
Groman, August, Odebolt	Moorehead, Giles C., Ida Grove	Winkler, Frank P., Sibley
Grubb, Merrill W., Galva	Morgan, Harold W., Mason City	Yocom Hospital, Chariton
Hage, Martin M., Lake Mills	Mott, William H., Farmington	
Hake, Mr. H. N., Reinbeck		

Roster of Physicians in Military Service

As of November 23, 1942

Adair County

Cornell, Dale D., Greenfield (Camp Murray, Washington)
Gantz, Albert J., Greenfield (San Francisco, California)

Adams County

Willet, Wilton J., Carbon (Fort Smith, Arkansas)

Allamakee County

Hogan, Paul W., Waukon
Ivens, Milton H., Waukon (Camp Shelby, Louisiana)
Kiesau, Milton F., Postville (Fort Leonard Wood, Missouri)
Rominger, Clark W., Waukon

Appanoose County

Edwards, Ralph E., Centerville
Huston, Marshall D., Centerville (Lowry Field, Colorado)

Audubon County

Koehne, Frederick D., Audubon (Oroville, Washington)

Benton County

Koontz, Lyle W., Vinton
Lewis, Leland S., Garrison
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, Donald W., Waterloo (Camp Barkeley, Texas)
Bickley, John W., Waterloo (Fort Sill, Oklahoma)
Butts, John H., Waterloo (Ames, Iowa)
Cooper, Clark N., Waterloo (Mare Island, California)
Elyson, Craig D., Waterloo (Norfolk, Virginia)
Hartman, Howard J., Waterloo (Fort Lewis, Washington)
Henderson, Lauren J., Cedar Falls (Fort Ord, California)
Hoyt, Charles N., Cedar Falls (McClellan Field, Alabama)
Ludwick, Arthur L., Waterloo (A.P.O., New York, New York)
O'Keefe, Paul T., Waterloo (Camp Pickett, Virginia)
Paige, Robert T., La Porte City (Des Moines, Iowa)
Rohlf, Edward L., Jr., Waterloo (Springfield, Missouri)
Seibert, Cecil W., Waterloo (Fort Wright, Washington)
Smith, Eugene E., Waterloo (Scott Field, Illinois)
Smith, Rex L., Waterloo (Reno, Nevada)
Smith, Rupard G., Waterloo (A.P.O., New York, New York)
Trunnell, Thomas L., Waterloo (Great Lakes, Illinois)

Boone County

Brewster, Edward S., Boone (Camp Chaffee, Arkansas)
Healy, Maurice D., Boone
Shane, Robert S., Pilot Mound (Des Moines, Iowa)

Bremer County

Amlie, Paul J., Tripoli (Des Moines, Iowa)
Rathe, Herbert W., Waverly (Springfield, Missouri)

Buchanan County

Barton, John C., Independence (Omaha, Nebraska)
Leehey, Paul J., Independence (A.P.O., San Francisco, California)
Loeck, John F., Aurora (Camp Hood, Texas)

Buena Vista County

Almquist, Reuben E., Albert City (Camp Shelby, Mississippi)
Brecher, Paul W., Storm Lake (Camp White, Oregon)
Mailliard, Robert E., Storm Lake (Watertown, New York)
Shope, Charles D., Storm Lake (Fort Des Moines, Iowa)
Witte, Herbert J., Storm Lake (Fort Robinson, Nebraska)

Butler County

Andersen, Bruce V., Greene (Kansas City, Missouri)
James, Roger A., Allison (Mare Island, California)
Rolfs, Floyd O., Parkersburg (Springfield, Missouri)

Calhoun County

Faust, John H., Manson (San Diego, California)
Grinley, Andrew V., Rockwell City (A.P.O., New York, New York)
Hobart, Francis W., Lake City (Camp Grant, Illinois)
Peek, Levin H., Lake City (Jefferson Barracks, Missouri)
Stevenson, William W., Rockwell City (San Francisco, California)
Weyer, Joseph J., Lohrville (Camp Carson, Colorado)

Carroll County

Anneberg, A. Reas, Carroll (Camp Barkeley, Texas)
Anneberg, Walter A., Carroll
Cochran, J. Lawrence, Carroll (Gulfport, Mississippi)
Cross, Donald L., Coon Rapids
Freedland, Maurice, Coon Rapids
Morrison, John R., Carroll (Carlisle Barracks, Pennsylvania)
Morrison, Roland B., Carroll (March Field, California)
Pascoe, Paul L., Carroll (Bowman Field, Kentucky)
Scannell, Raymond C., Carroll (Fort Leonard Wood, Missouri)
Tindall, Robert N., Coon Rapids
Wyatt, Merlin R., Manning (Carlisle Barracks, Pennsylvania)

Cass County

Egbert, Daniel S., Atlantic (Fort Snelling, Minnesota)
Longstreth, Clyde M., Atlantic
Needles, Roscoe M., Atlantic (Camp Polk, Louisiana)
Petersen, Millard T., Atlantic (Camp Barkeley, Texas)

Cedar County

Mosher, Martin L., West Branch (Camp Chaffee, Arkansas)
O'Neal, Harold E., Tipton (Pine Camp, New York)

Cerro Gordo County

Adams, Carroll O., Mason City (Brigham City, Utah)
Egloff, William C., Mason City (Santa Ana, California)
Hale, Albert E., Dougherty (Camp Carson, Colorado)
Harris, Robert H., Mason City (Selfridge Field, Michigan)
Harrison, Glenn E., Mason City (Boston, Massachusetts)
Holman, David O., Mason City (Camp Grant, Illinois)
Houlahan, Jay E., Mason City (Pendleton, Oregon)
Lannon, James W., Clear Lake (Carlisle Barracks, Pennsylvania)
Long, Draper L., Mason City (Santa Ana, California)
Marinos, Harry G., Mason City (A.P.O., San Francisco, California)
Sternhill, Irving, Mason City (A.P.O., New York, New York)

Cherokee County

Bullock, Grant D., Washta (Camp Livingston, Louisiana)
Ihle, Charles W., Jr., Cleghorn (Fort Leonard Wood, Missouri)
Noble, Rus P., Cherokee (Sacramento, California)
Swift, Charles F., Jr., Marcus (Fort Bliss, Texas)

Chickasaw County

Caulfield, John D., New Hampton (Denver, Colorado)
Murphy, Arlo L., Fredericksburg (Fort Clayton, Panama Canal Zone)
O'Connor, Edwin C., New Hampton (Camp Crowder, Missouri)
Richmond, Paul C., New Hampton (Fort Leonard Wood, Missouri)

Clarke County

Mikelson, Clarence J., Osceola (Camp Robinson, Arkansas)

Clay County

Adams, Glenn W., Royal (Fort Clayton, Panama Canal Zone)
Edington, Frank D., Spencer (Scott Field, Illinois)
Jones, Clare C., Spencer (San Diego, California)
King, Dean H., Spencer (Spokane, Washington)

Clayton County

Anderson, Holger M., Strawberry Point (Joplin, Missouri)
Rhomburg, Edward B., Guttenberg (Fort Sam Houston, Texas)

Clinton County

Ellison, George M., Clinton (Blessing, Texas)
Hill, Don E., Clinton
King, Ross C., Clinton (Camp Chaffee, Arkansas)
Meyer, Alfred K., Clinton (Denver, Colorado)
Norment, John E., Clinton (Mare Island, California)
Riedesel, Elmer V., Wheatland (Fort Douglas, Utah)
Snyder, Dean C., De Witt
Van Epps, Eugene F., Clinton
Waggoner, Charles V., Clinton (Seattle, Washington)

Crawford County

Fee, Charles H., Denison (Bowman Field, Kentucky)
Maire, Eugene J., Vail (San Francisco, California)
Wetrich, Max F., Manilla

Dallas-Guthrie Counties

Faile, Charles S., Adel (Farragut Air Base, Idaho)
Margolin, Julius M., Perry (Camp Chaffee, Arkansas)
Nicol, Charles A., Panora (Camp Barkeley, Texas)
Osborn, C. Robert, Dexter (San Francisco, California)
Todd, Donald W., Guthrie Center (Camp Barkeley, Texas)
Wilke, Frank A., Woodward (A.P.O., New York, New York)

Decatur County

Doss, William N., Leon (A.P.O., San Francisco, California)
Gamer, Elmo E., Lamoni (Tacoma, Washington)

Delaware County

Baumgarten, Oscar, Earlville (A.P.O., Los Angeles, California)
Clark, Richardson E., Manchester (Fort Riley, Kansas)

Des Moines County

Eigenfeld, Morris L., Burlington
Heitzman, Paul O., Burlington (Fort Leonard Wood, Missouri)
Jenkins, George D., Burlington (Fort Dix, New Jersey)
Lohmann, Carl J., Burlington (Fort Lewis, Washington)
McKitterick, John C., Burlington (Navy Pier, Chicago, Illinois)
Moerke, Robert F., Burlington (Fort Sam Houston, Texas)

Dickinson County

Buchanan, John J., Milford (Great Lakes, Illinois)
Henning, Harold G., Milford (Camp Pickett, Virginia)
Nicholson, Clyde G., Spirit Lake (Fort Douglas, Utah)
Rodawig, Don F., Spirit Lake (Fort Hancock, New Jersey)

Dubuque County

Beddows, Morris G., Cascade (Omaha, Nebraska)
Conzett, Donald C., Dubuque (Fort Riley, Kansas)
Edstrom, Henry, Dubuque (Denver, Colorado)
Entringer, Albert J., Dubuque (Camp Murray, Washington)

- Hall, Carl B., Dubuque
 Knoll, Albert H., Dubuque
 Langford, William R., Epworth (Rapid City, South Dakota)
 Leik, Donald W., Dubuque (Las Vegas, Nevada)
 Mueller, John J., Dyersville
 Olson, Paul F., Dubuque (Bremerton, Washington)
 Painter, Robert C., Dubuque (San Diego, California)
 Paulus, James W., Dubuque
 Plankers, Arthur G., Dubuque (Fort Sill, Oklahoma)
 Quinn, Francis P., Dubuque (El Paso, Texas)
 Scharle, Theodore, Dubuque
 Schueler, Charles J., Dubuque (Camp Robinson, Arkansas)
 Sharpe, Donald C., Dubuque (Fort Leonard Wood, Missouri)
 Smith, Carl W., Dubuque (San Francisco, California)
 Steffens, Lincoln F., Dubuque (Fort Snelling, Minnesota)
 Ward, Donovan F., Dubuque (Mare Island, California)
- Emmet County
 Clark, James P., Estherville (Fort Sam Houston, Texas)
 Collins, Loren E., Estherville
 Miller, Oscar H., Estherville (Gowen Field, Idaho)
- Fayette County
 Belding, Leland, Waucoma
 Camp, Donald E., West Union
 Gallagher, John P., Oelwein (San Diego, California)
 Henderson, Walker B., Oelwein (Jefferson Barracks, Missouri)
 Hess, Ardo M., West Union
 Moen, Harry P., West Union (Denver, Colorado)
 Sulzbach, John, Oelwein
- Floyd County
 Baltzell, Winston C., Charles City (Fort Sam Houston, Texas)
 Mackie, Donald G., Charles City
 Miner, James B., Jr., Charles City (San Diego, California)
 Tolliver, Hillard A., Charles City (Fort Cronkhite, California)
- Franklin County
 Byers, Walter L., Sheffield
 Hedgecock, Lewis E., Hampton
 Walton, Seth G., Hampton (Camp Robinson, Arkansas)
- Fremont County
 Kerr, W. Hawley, Hamburg
 Marrs, Walford D., Tabor (San Francisco, California)
 Wanamaker, A. Roy, Hamburg
- Greene County
 Cartwright, Forrest P., Grand Junction (Casper, Wyoming)
 Castles, William A., Jr., Rippey (Fort Riley, Kansas)
 Hanson, Laurence C., Jefferson (Camp Grant, Illinois)
 Jongeward, Albert J., Jefferson (Great Lakes, Illinois)
 Limberg, John I., Jr., Jefferson
 Lohr, Phillips E., Churdan
- Grundy County
 Rose, Joseph E., Grundy Center
- Hamilton County
 Buxton, Otho C., Webster City (March Field, California)
 Howar, Bruce F., Jewell (A.P.O., New York, New York)
 James, David W., Kamrar (Camp Livingston, Louisiana)
 Lewis, William B., Webster City (Camp Young, California)
 Mooney, Felix P., Jewell (A.P.O., New York, New York)
 Patterson, Roy A., Webster City (San Diego, California)
 Ptacek, Joseph L., Webster City (Sheppard Field, Texas)
- Hancock-Winnebago Counties
 Dolmage, George H., Buffalo Center (Fort Sam Houston, Texas)
 Dulmes, Abraham H., Klemme (Camp Lewis, Washington)
 Eller, Lancelot W., Kanawha (Fort Leonard Wood, Missouri)
 Shaw, David F., Britt (Long Beach, California)
 Thomas, Clifford W., Forest City (Camp Crowder, Missouri)
- Hardin County
 Houlihan, Francis W., Ackley (Iowa City, Iowa)
 Jansoni, John W., Eldora (Vancouver, Washington)
 Johnson, Robert J., Iowa Falls (Fort Bliss, Texas)
 Johnson, William A., Alden (Pendleton, Oregon)
 Shurts, John J., Eldora (Camp Roberts, California)
 Todd, V. Stanley, Eldora (Abilene, Texas)
- Harrison County
 Bergstrom, Albin C., Missouri Valley (Camp Robinson, Arkansas)
 Byrnes, Clemmet W., Dunlap (Jefferson Barracks, Missouri)
 Tamisiea, Francis X., Missouri Valley (Jefferson Barracks, Missouri)
- Henry County
 Brown, Wayne B., Mount Pleasant (Springfield, Missouri)
 Gloeckler, Bernhard B., Mt. Pleasant (San Antonio, Texas)
 Hartley, Byron D., Mount Pleasant (Phoenix, Arizona)
 Megorden, William H., Mount Pleasant
 Ristine, Leonard P., Mount Pleasant (Sioux Falls, South Dakota)
- Howard County
 Buresh, Abner, Lime Springs
 Nierling, Paul A., Cresco (Camp Polk, Louisiana)
- Humboldt County
 Arent, Asa S., Humboldt (March Field, California)
 Coddington, James H., Humboldt
- Ida County
 Dressler, John B., Ida Grove
 Harris, Herbert H., Battle Creek (Omaha, Nebraska)
 Martin, James W., Holstein (San Antonio, Texas)
- Iowa County
 McDaniel, John D., Marengo (Fort Clark, Texas)
- Jackson County
 Tilton, John J., Maquoketa
- Jasper County
 Doake, Clarke, Newton
 Minkel, Roger M., Newton (A.P.O., New York, New York)
 Ritchey, Sterling J., Newton
- Jefferson County
 Castell, John W., Fairfield (A.P.O., New York, New York)
 Gittler, Ludwig, Fairfield (A.P.O., New York, New York)
 Gruber, Harold E., Fairfield (Camp Grant, Illinois)
 James, Lora D., Fairfield
 Taylor, Ingram C., Fairfield (Washington, D. C.)
- Johnson County
 Adland, Samuel A., Iowa City
 Allen, James H., Iowa City
 Boiler, William F., Iowa City (Fort Leonard Wood, Missouri)
 Boyd, Eugene J., Iowa City (Camp Blanding, Florida)
 Brinkhous, Kenneth M., Iowa City (Fort Sam Houston, Texas)
 Cooper, Wayne K., Iowa City (Jefferson Barracks, Missouri)
 Crowell, Edwin A., Iowa City (Spokane, Washington)
 Diddle, Albert W., Iowa City (Key West, Florida)
 Elmquist, Homer S., Iowa City (San Diego, California)
 Emmons, Marcus B., Iowa City (Fort Sam Houston, Texas)
 Flynn, Joseph E., Iowa City (Hot Springs, Arkansas)
 Fourt, Arthur S., Iowa City (A.P.O., New York, New York)
 Francis, Norton L., Iowa City (Annapolis, Maryland)
 Galinsky, Leon J., Oakdale (Fort Logan, Colorado)
 Garlinghouse, Robert O., Iowa City (Fort Snelling, Minnesota)
 Gilliland, C. R., Iowa City (Great Lakes, Illinois)
 Hardin, Robert C., Iowa City (A.P.O., New York, New York)
 Harris, Karl S., Iowa City (Camp Crowder, Missouri)
 Hartung, Walter, Iowa City (Fort Des Moines, Iowa)
 Irwin, Ralph L., Iowa City (Great Lakes, Illinois)
 January, Lewis E., Iowa City (Davis Field, Arizona)
 Keil, Phillip G., Iowa City
 Keislars, Henry D., Iowa City
 Longwell, Freeman H., Iowa City (Cumberland, Maryland)
 Naify, Stephen F., Iowa City (Memphis, Tennessee)
 Newman, Robert W., Iowa City (Upper Darby, Pennsylvania)
 Paulus, Edward W., Iowa City (A.P.O., New York, New York)
 Petersen, Vernon W., Iowa City (A.P.O., New York, New York)
 Sells, Robert L., Jr., Iowa City (Hamilton Field, California)
 Skouge, O. T., Iowa City
 Smith, Harold F., Iowa City (Great Lakes, Illinois)
 Springer, Eugene W., Iowa City (Pontiac, Michigan)
 Stadler, Harold E., Iowa City (Fort Harrison, Indiana)
 Staggs, William A., Iowa City (Camp Robinson, Arkansas)
 Stump, Robert B., Iowa City (Fort Leonard Wood, Missouri)
 Titus, Elton L., Iowa City (Fort Wright, New York)
 Vest, William M., Iowa City (Fort Ord, California)
 Weatherly, Howard E., Iowa City (Chicago, Illinois)
 Ziffren, Sidney E., Iowa City (Springfield, Missouri)
- Keokuk County
 Bjork, Floyd, Keota
 Doyle, Joseph L., Sigourney (Camp Barkley, Texas)
 Montgomery, Guy E., Keota (Fort Sam Houston, Texas)
 Wiley, Dudley, Hedrick (Mason City, Washington)
- Kossuth County
 Clapsaddle, Dean W., Burt (Durham, North Carolina)
 Williams, Robert L., Lakota (San Diego, California)
- Lee County
 Ashline, George H., Keokuk (Camp Young, California)
 Cleary, Hugh G., Fort Madison (Parsons, Kansas)
 Cooper, Raymond E., Keokuk (Fort Leonard Wood, Missouri)
 Johnstone, Alexander A., Keokuk (Camp Robinson, Arkansas)
 McKee, Thomas L., Keokuk (San Francisco, California)
 Pumphrey, Loira C., Keokuk (Fort Leavenworth, Kansas)
 Rankin, John R., Keokuk (A.P.O., San Francisco, California)
 Steffey, Fred L., Keokuk (Fort Snelling, Minnesota)
 Van Werden, Benjamin D., Keokuk (Fort Jackson, South Carolina)
- Linn County
 Andre, Gaylord R., Lisbon (Camp Barkeley, Texas)
 Berney, Paul W., Cedar Rapids (San Francisco, California)
 Challed, Don S., Cedar Rapids (Fort Ord, California)
 Chapman, Robert M., Cedar Rapids
 Coughlan, Vernon H., Cedar Rapids (Fort Snelling, Minnesota)
 Courter, Willard O., Springville (Fort Warren, Wyoming)
 Crew, Philip L., Marion (San Antonio, Texas)
 Dunn, Francis C., Cedar Rapids
 Halpin, Lawrence J., Cedar Rapids (Atlanta, Georgia)
 Hecker, John T., Cedar Rapids (Pecos, Texas)
 Jirsa, Harold O., Cedar Rapids (Carlisle Barracks, Pennsylvania)

- Keith, John J., Marion (A.P.O., San Francisco, California)
 Kruckenber, William G., Mount Vernon (Elgin, Illinois)
 Locher, Robert C., Cedar Rapids
 MacDougal, Roderick F., Cedar Rapids
 McConkie, Edwin B., Cedar Rapids (Sioux Falls, South Dakota)
 McQuiston, J. Stuart, Cedar Rapids (Salina, Kansas)
 Netolicky, Robert Y., Cedar Rapids (Mare Island, California)
 Noe, Carl A., Cedar Rapids (Hot Springs, Arkansas)
 Parke, John, Cedar Rapids (Carlisle Barracks, Pennsylvania)
 Proctor, Rothwell D., Cedar Rapids (Corpus Christi, Texas)
 Redmond, James J., Cedar Rapids (Camp Claiborne, Louisiana)
 Rieniets, John H., Cedar Rapids (Great Lakes, Illinois)
 Sedlacek, Leo B., Cedar Rapids
 Stark, Callistus H., Cedar Rapids
 Sulek, Arthur E., Cedar Rapids (Camp Shelby, Mississippi)
 Woodhouse, Keith W., Cedar Rapids
 Wray, Robert M., Cedar Rapids (A.P.O., San Francisco, California)
 Yavorsky, William D., Cedar Rapids (A.P.O., San Francisco, California)
- Louisa County
 DeYarman, Kyle T., Morning Sun (San Antonio, Texas)
- Lucas County
 Lister, Kenneth E., Chariton (Fort Snelling, Minnesota)
- Lyon County
 Cook, Stuart H., Rock Rapids (Carlisle Barracks, Pennsylvania)
 Corcoran, Thomas E., Rock Rapids (A.P.O., New York, New York)
 De Young, George M., George (Camp Barkeley, Texas)
 Moriarty, John F., Rock Rapids (Fort Leonard Wood, Missouri)
- Madison County
 Boden, Harold N., Truro (Fresno, California)
 Chesnut, Paul F., Winterset
 Wicks, Ralph F., Winterset (Portland, Oregon)
 Veltman, John F., Winterset (St. Louis, Missouri)
- Masaska County
 Bennett, Geoffrey W., Oskaloosa (Des Moines, Iowa)
 Clark, George H., Oskaloosa
 Lemon, Kenneth M., Oskaloosa (Rapid City, South Dakota)
- Marion County
 Elliott, Vance J., Knoxville (South Laguna, California)
 Mater, Dwight A., Knoxville (Scott Field, Illinois)
 Ralston, F. Paul, Knoxville
 Schiek, Charles M., Knoxville
 Schroeder, Mellgren C., Pella
 Williams, Donald B., Knoxville
- Marshall County
 Carpenter, Ralph C., Marshalltown (Vancouver, Washington)
 Marble, Edwin J., Marshalltown (San Diego, California)
 Marble, Willard P., Marshalltown (Walla Walla, Washington)
 Meyer, Milo G., Marshalltown (Camp Polk, Louisiana)
 Noonan, James J., Marshalltown (Fort Douglas, Utah)
 Phelps, Richard E., State Center (Camp Baker, California)
 Sanning, John J., Melbourne (Camp Robinson, Arkansas)
 Smith, Elmer M., State Center (Gowen Field, Idaho)
 Stegman, James J., Marshalltown (Portland, Oregon)
 Wahrer, Frederick L., Marshalltown (Camp Polk, Louisiana)
 Wells, Rodney C., Marshalltown (Gowen Field, Idaho)
 Wolfe, Otis D., Marshalltown (Fort Riley, Kansas)
 Wolfe, Russell M., Marshalltown (Pensacola, Florida)
- Mills County
 DeYoung, Ward A., Glenwood (Omaha, Nebraska)
 Shonka, Thomas E., Malvern (Camp Russell, Texas)
- Mitchell County
 Culbertson, Robert A., St. Ansgar (Fort Des Moines, Iowa)
 Moore, Edson E., (Camp Pickett, Virginia)
 Walker, Thomas G., Riceville
- Monona County
 Almer, Lennart E., Moorehead (Fort Knox, Kentucky)
 Gaukel, Leo A., Onawa
 Harlan, Martin E., Onawa
 Stauch, Martin O., Whiting (Fort Rosencrans, California)
 Wainwright, Maxwell T., Mapleton (Camp Barkeley, Texas)
 Wolpert, Paul L., Onawa (Denver, Colorado)
- Monroe County
 Richter, Harold A., Albia (San Antonio, Texas)
 Smith, Robert A., Albia (San Antonio, Texas)
- Montgomery County
 Bastron, Harold C., Red Oak (Pendleton, Oregon)
 Moriarty, Lauren R., Villisca (Camp Robinson, Arkansas)
 Sorenson, Elmer M., Red Oak
- Muscatine County
 Ady, Albert E., West Liberty (A.P.O., San Francisco, California)
 Asthalter, Robert. Muscatine
 Carlson, Elmer H., Muscatine (Chicago, Illinois)
- Goad, Robley R., Muscatine (Hyattsville, Maryland)
 Kimball, John E., Jr., West Liberty (A.P.O., Miami, Florida)
 Lindley, Ellsworth, Muscatine
 Muhs, Emil O., Muscatine (Camp Robinson, Arkansas)
 Norem, Walter, Muscatine
 Sywassink, George A., Muscatine (Vancouver, Washington)
 Whitmer, Lysle H., Wilton Junction (Fort Sill, Oklahoma)
- O'Brien County
 Getty, Everett B., Primghar (Camp Robinson, Arkansas)
 Hayne, Willard W., Paullina (March Field, California)
 Moen, Stanley T., Hartley (Los Angeles, California)
 Myers, Kermit W., Sheldon (White Bear, Minnesota)
- Osceola County
 Kuntz, George S., Sibley (A.P.O., New York, New York)
- Page County
 Blackman, Nathan, Shenandoah
 Bossingham, Earl N., Clarinda (Camp Roberts, California)
 Burdick, Francis D., Shenandoah (Carlisle Barracks, Pennsylvania)
 Burnett, Francis K., Clarinda (Fort Warren, Wyoming)
 Little, Emmet B., Shenandoah
 Rausch, Gerald R., Clarinda (Wendover Field, Utah)
 Savage, Lester W., Shenandoah (Fort Meade, Maryland)
- Palo Alto County
 Davey, William P., Emmetsburg (San Diego, California)
- Plymouth County
 Foss, Robert H., Remsen (Fort Wright, Washington)
 Wolfson, Harold, Kingsley
- Pocahontas County
 Blair, Fred L., Jr., Fonda
 Herrick, Thomas G., Gilmore City
 Larsor, John B., Laurens (Camp Barkeley, Texas)
 Leserman, Lester K., Rolfe (Camp Livingston, Louisiana)
- Polk County
 Abbott, Walter D., Des Moines (Oakland, California)
 Anderson, N. Boyd, Des Moines (Bowling Green, Virginia)
 Angell, Charles A., Des Moines (Abilene, Texas)
 Ansprach, Royal S., Mitchellville (MacDill Field, Florida)
 Barner, John L., Des Moines (Atlanta, Georgia)
 Barnes, Bernard C., Des Moines (Ogden, Utah)
 Bates, Maurice T., Des Moines (Washington, D. C.)
 Bender, Herman R., Des Moines (Carlisle Barracks, Pennsylvania)
 Bond, Thomas A., Des Moines (Bethesda, Maryland)
 Bone, Harold C., Des Moines (Santa Barbara, California)
 Brown, Addison W., Des Moines (Fort Leavenworth, Kansas)
 Bruner, Julian M., Des Moines (Fort Bliss, Texas)
 Bruns, Paul D., Des Moines (Carlisle Barracks, Pennsylvania)
 Burgeson, Floyd M., Des Moines (A.P.O., New York, New York)
 Caldwell, John W., Des Moines (Edmonton, Alberta, Canada)
 Chambers, James W., Des Moines (Omaha, Nebraska)
 Chase, William B., Jr., Des Moines (Seattle, Washington)
 Clark, George E., Jr., Des Moines (Salt Lake City, Utah)
 Connell, John R., Des Moines (A.P.O., New York, New York)
 Corn, Henry H., Des Moines (St. Louis, Missouri)
 Coughlan, Daniel W., Des Moines (Camp Gruber, Oklahoma)
 Crowley, Fred A., Des Moines (Hot Springs, Arkansas)
 Crowley, Daniel F., Jr., Des Moines (A.P.O., New York, New York)
 DeCicco, Ralph, Des Moines (Oahu, Hawaii)
 Decker, Henry G., Des Moines (San Diego, California)
 Dushkin, Milton A., Des Moines (Fort Huachuca, Arizona)
 Elliott, Olin A., Des Moines (Pecos, Texas)
 Ellis, Howard G., Des Moines (Salt Lake City, Utah)
 Ervin, Lindsay J., Des Moines (Fort Clark, Texas)
 Fried, David, Des Moines (Carlisle Barracks, Pennsylvania)
 George, Everett M., Des Moines
 Gerchek, E. W., Des Moines
 Goldberg, Louie, Des Moines (Palm Springs, California)
 Gordon, Arnold M., Des Moines (Camp Barkeley, Texas)
 Graeber, Frederick O., Des Moines (Aberdeen, South Dakota)
 Greek, Lewis M., Des Moines (Camp Crowder, Missouri)
 Gurau, Henry H., Des Moines (Portland, Oregon)
 Haines, Diedrich J., Des Moines (Denver, Colorado)
 Harris, D. Dale, Des Moines (A.P.O., San Francisco, California)
 Harris, Hubert L., Des Moines
 Hess, John, Jr., Des Moines (Carlisle Barracks, Pennsylvania)
 James, Audra D., Des Moines (Great Lakes, Illinois)
 Johnston, C. Harlan, Des Moines (Augusta, Georgia)
 Kast, Donald H., Des Moines (Fort Stevens, Oregon)
 Kelly, Dennis H., Des Moines (Denver, Colorado)
 Kelley, Edmund J., Des Moines (Treasure Island, California)
 Klocksiem, Harold L., Des Moines
 Kottke, Elmer E., Des Moines (Temple, Texas)
 Landis, Sylvanis N., Des Moines (West Palm Beach, Florida)
 La Tona, Salvatore, Des Moines (Carlisle Barracks, Pennsylvania)
 Lederman, James, Des Moines
 Lehman, Emery W., Des Moines (Vancouver, Washington)
 Lovejoy, E. Parish, Des Moines (Mare Island, California)
 Maloney, Paul J., Des Moines (Fort Lewis, Washington)
 Marquis, George S., Des Moines (Great Lakes, Illinois)
 Martin, Lowell E., Des Moines
 Mauritz, Emory L., Des Moines (Camp Gruber, Oklahoma)

- McCoy, Harold J., Des Moines (Iowa City, Iowa)
 McDonald, Donald J., Des Moines (March Field, California)
 McNamee, Jesse H., Des Moines (Seattle, Washington)
 Mencher, E. W., Des Moines
 Merkel, Byron M., Des Moines (Tullahoma, Tennessee)
 Morden, R. Paul, Des Moines (March Field, California)
 Murphy, James H., Des Moines (San Diego, California)
 Nelson, Arnold L., Des Moines (Camp Livingston, Louisiana)
 Noun, Louis J., Des Moines (Great Lakes, Illinois)
 Nourse, Myron H., Des Moines (Bethesda, Maryland)
 Patton, Bernard W., Des Moines (Camp Robinson, Arkansas)
 Pearlman, Leo R., Des Moines (Fort Ord, California)
 Peisen, Conan J., Des Moines (Fort Perry, Ohio)
 Penn, Eugene C., West Des Moines (Spokane, Washington)
 Pfeiffer, Eric P., Des Moines (Springfield, Missouri)
 Phillips, Allan B., Des Moines (Corpus Christi, Texas)
 Porter, Robert J., Des Moines (Salt Lake City, Utah)
 Powell, Lester D., Des Moines (San Diego, California)
 Pratt, Elmer B., Des Moines (Fredericksburg, Virginia)
 Priestley, Joseph B., Des Moines (Camp Carson, Colorado)
 Purdy, William O., Des Moines (Camp Livingston, Louisiana)
 Riegelman, Ralph H., Des Moines (Randolph Field, Texas)
 Rotkow, Maurice J., Des Moines (El Paso, Texas)
 Schaeferle, Martin J., Des Moines (Carlisle Barracks, Pennsylvania)
 Schlaser, Vernon L., Des Moines (Chicago, Illinois)
 Shepherd, Lloyd K., Des Moines (A.P.O., New York, New York)
 Shiffner, H. Kirby, Des Moines (A.P.O., New York, New York)
 Singer, Paul L., Des Moines (Camp Grant, Illinois)
 Skultety, James, Des Moines (Staten Island, New York)
 Smead, Howard H., Des Moines (Wichita Falls, Texas)
 Smith, Herman J., Des Moines (San Diego, California)
 Smith, Roland T., Des Moines
 Snodgrass, Ralph W., Des Moines (Fort Rosecrans, California)
 Snyder, Glen E., Grimes (Camp Robinson, Arkansas)
 Sohn, Herbert H., Des Moines (San Diego, California)
 Sorensen, Regnar M., Des Moines (Topeka, Kansas)
 Springer, Floyd A., Des Moines (San Francisco, California)
 Stearns, A. Bryce, Des Moines (Denver, Colorado)
 Stickler, Robert, Des Moines (Fort Benning, Georgia)
 Stitt, Paul L., Des Moines (Great Lakes, Illinois)
 Throckmorton, J. Fred, Des Moines (Camp Barkeley, Texas)
 Toubes, Abraham A., Des Moines (Greenville, Mississippi)
 Turner, Howard V., Des Moines (Hot Springs, Arkansas)
 Updegraff, Thomas, Des Moines (Spokane, Washington)
 Vaubel, Ellis K., Des Moines (Vancouver, Washington)
 Wagner, Eugene C., Des Moines (Washington, D. C.)
 Willett, Wendell M., Des Moines (Fort Bragg, North Carolina)
 Zarchy, Alex Z., Des Moines (Camp Cook, California)
- Pottawattamie County
 Beaumont, Fred H., Council Bluffs (A.P.O., New York, New York)
 Cogley, J. Philip, Council Bluffs (Camp Young, California)
 Collins, Robert M., Council Bluffs (San Diego, California)
 Dean, Abbott M., Council Bluffs (Pensacola, Florida)
 Hennessy, J. Donald, Council Bluffs (Chicago, Illinois)
 Hungerford, W. E., Avoca
 Jensen, Arnold L., Council Bluffs (A. P. O., San Francisco, California)
 Klok, George J., Council Bluffs
 Kurth, Clarence J., Council Bluffs (Camp Crowder, Missouri)
 Limbert, Edwin M., Council Bluffs (Omaha, Nebraska)
 Maiden, Sydner D., Council Bluffs (San Francisco, California)
 Martin, Lee R., Council Bluffs (A.P.O., Los Angeles, California)
 Mathiaen, Henning W., Council Bluffs
 Sternhill, Isaac, Council Bluffs (Fort Warren, Wyoming)
 Tinley, Robert E., Council Bluffs (A.P.O., New York, New York)
 Treynor, Jack V., Council Bluffs (South Bend, Indiana)
 Wieseler, R. J., Avoca (McChord Field, Washington)
 Wurl, Otto A., Council Bluffs (Camp Claiborne, Louisiana)
- Poweshiek County
 Brobyn, Thomas E., Grinnell (Camp San Luis Obispo, California)
 Hickerson, Luther C., Brooklyn (Oxnard, California)
 Korfmacsher, Edwin S., Grinnell (San Francisco, California)
 Niemann, Theodore V., Brooklyn (Camp Shelby, Mississippi)
 Parish, John R., Grinnell (San Francisco, California)
- Ringgold County
 Seaman, Charles L., Mount Ayr (Van Buren, Arkansas)
- Sac County
 Bassett, George H., Sac City (San Diego, California)
 Deters, Donald C., Schaller (A.P.O., New York, New York)
 Evans, William I., Sac City (Camp Hood, Texas)
 Klocksiem, Roy G., Odebolt (A.P.O., San Francisco, California)
 New, Harold N., Sac City (Jefferson Barracks, Missouri)
- Scott County
 Balzer, Walter J., Davenport (Fort Douglas, Utah)
 Bishop, James F., Davenport (A.P.O., Seattle, Washington)
 Block, Lawrence A., Davenport
 Boden, Worthy C., Davenport (Biloxi, Mississippi)
 Brown, Douglas H., Davenport
 Brown, Merle J., Davenport (Pando, Colorado)
 Carey, Edward T., Davenport
- Christiansen, Charles C., Dixon (A.P.O., San Francisco, California)
 Evans, Harold J., Davenport
 Gibson, Preston E., Davenport (Palm Springs, California)
 Hurevitz, Hyman M., Davenport (Fort Lewis, Washington)
 Kimberly, Lester W., Davenport
 LaDage, Lee H., Davenport (Camp Campbell, Kentucky)
 Lorfeld, Gerhart W., Davenport (San Antonio, Texas)
 Marke, John I., Davenport (Camp Carson, Colorado)
 McMeans, Thomas W., Davenport (A.P.O., New York, New York)
 Neufeld, Robert J., Davenport
 Shafer, Arthur W., Davenport (Camp Bowie, Texas)
 Sheeler, Ivan H., Davenport (Omaha, Nebraska)
 Sorenson, Aral C., Davenport (Mare Island, California)
 Sunderbruch, John H., Davenport (Camp Maxey, Pennsylvania)
 Weinberg, Harry B., Davenport (Fort Benning, Georgia)
 Zukerman, Cecil M., Bettendorf
- Sioux County
 Gleysteen, Rodney R., Alton (A.P.O., San Francisco, California)
 Larson, Marvin O., Hawarden (Camp Robinson, Arkansas)
- Story County
 Conner, John D., Nevada (Camp Robinson, Arkansas)
 Lewka, Alfred H., Story City (San Diego, California)
 McFarland, Guy E., Jr., Ames (San Diego, California)
 McFarland, Julian E., Ames (Farragut Air Base, Idaho)
 Rosebrook, Lee E., Ames (Knobnoster, Missouri)
 Sborow, Wendell B., Nevada (San Diego, California)
 Thorburn, Orval L., Ames (Las Vegas, Nevada)
- Tama County
 Boller, Galen C., Traer (Fort Leonard Wood, Missouri)
 Dobias, Stephen G., Chelsea (A.P.O., Seattle, Washington)
 Havlik, Al. J., Tama (A.P.O., San Francisco, California)
 Roberts, Charles R., Dysart (San Diego, California)
 Schaeferle, Lawrence G., Gladbrook (Fort Leonard Wood, Missouri)
 Standefer, Joe M., Tama (San Diego, California)
- Taylor County
 Hardin, John F., Bedford (Fort Wood, Missouri)
- Union County
 Paragas, Modesto R., Creston (Tampa, Florida)
 Ryan, Cyril J., Creston (Salt Lake City, Utah)
- Wapello County
 Brentan, Emanuel, Ottumwa (Moline, Illinois)
 Brody, Sidney, Ottumwa
 Gilfillan, Clarence D. N., Eldon
 Hughes, Robert O., Ottumwa (San Diego, California)
 Nelson, Frederick L., Jr., Ottumwa
 Prewitt, Leland H., Ottumwa
 Selman, Ralph J., Ottumwa (El Paso, Texas)
 Struble, Gilbert C., Ottumwa (Fort Harrison, Indiana)
 Whitehouse, William N., Ottumwa
- Warren County
 Fullgrabe, Emil A., Indianola (Bethesda, Maryland)
 Shaw, Ernest E., Indianola (Fort Sam Houston, Texas)
 Trueblood, Claire A., Indianola (Camp Campbell, Kentucky)
- Washington County
 Boice, Clyde L., Washington (Pensacola, Florida)
 Droz, A. Keith, Washington (Grosse Ile, Michigan)
 Mast, Truman M., Washington (Sioux Falls, South Dakota)
 Stutsman, Robert, Washington
 Ware, Stephen C., Kalona (Ft. Meade, Maryland)
- Wayne County
 Hyatt, Charles N., Jr., Humeston (Fort Wood, Missouri)
- Webster County
 Baker, Charles J., Fort Dodge (Camp Claiborne, Louisiana)
 Burch, Earl S., Dayton (Camp Livingston, Louisiana)
 Coughlan, Charles H., Fort Dodge (Jefferson Barracks, Missouri)
 Joyner, Nevill M., Fort Dodge (Brooklyn Field, Alabama)
 Kluever, Herman C., Fort Dodge
 Larsen, Harold T., Fort Dodge (Newport, Rhode Island)
 Shrader, John C., Fort Dodge (Camp Young, California)
 Thatcher, Orville D., Fort Dodge (Kelly Field, Texas)
 Thatcher, Wilbur C., Fort Dodge
 Van Patten, E. Martin, Fort Dodge
- Winneshiek County
 Fritchken, Arthur F., Decorah (Oahu, Hawaii)
 Hopsodarsky, Leonard J., Ridgeway (Seattle, Washington)
 Larson, Lester E., Decorah
 Van Besien, George J., Decorah (Fort Leavenworth, Kansas)
- Woodbury County
 Bettler, Philip L., Sioux City (Pearl Harbor, Hawaii)
 Blackstone, Martin A., Sioux City (Pittsburg, California)
 Boe, Henry, Sioux City (Salina, Kansas)
 Burroughs, Hubert H., Sioux City (San Diego, California)
 Cmeylea, Patrick M., Sioux City (A.P.O., San Francisco, California)
 Crowder, Roy E., Sioux City (San Diego, California)
 Dimsdale, Lewis J., Sioux City (Camp Claiborne, Louisiana)
 Down, Howard I., Sioux City (Camp Breckenridge, Kentucky)

Elson, Vervil J., Danbury (A.P.O., Seattle, Washington)
 Frank, Louis J., Sioux City (Mare Island, California)
 Graham, James W., Sioux City (San Diego, California)
 Grossman, Milton, Sioux City (Hobbs, New Mexico)
 Heffernan, Chauncey E., Sioux City (Salt Lake City, Utah)
 Hicks, Wayland K., Sioux City (Salina, Kansas)
 Honke, Edward W., Sioux City (Palm Springs, California)
 Knott, Robert C., Sioux City (New York, New York)
 Kaplan, David, Sioux City (Fort Bragg, North Carolina)
 Krigsten, William M., Sioux City (Springfield, Missouri)
 Lande, Jacob N., Sioux City (Whalley, England)
 McCuistion, Harry M., Sioux City (A.P.O., New York, New York)
 Martin, Ronald F., Sioux City (Camp Atterbury, Indiana)
 Mattice, Lloyd H., Danbury (Camp Livingston, Louisiana)
 Mugan, Robert C., Sioux City (Gowen Field, Idaho)
 Osincup, Paul W., Sioux City (Sioux City Air Base, Iowa)
 Rarick, Ivan H., Sioux City (Soquel, California)
 Reeder, James E., Jr., Sioux City (Modesto, California)
 Ryan, Martin J., Sioux City (Topeka, Kansas)
 Schwartz, John W., Sioux City (Camp Crowder, Missouri)
 Tracy, John F., Sioux City (Salt Lake City, Utah)
 Wilson, Leo L., Sioux City (Camp San Luis Obispo, California)

Worth County

Osten, Burdette H., Northwood
 Westley, Gabriel S., Manly (Camp Forrest, Tennessee)

Wright County

Aageson, Carl A., Dows
 Bird, Raymond G., Clarion (San Diego, California)
 Doles, Emmet A., Clarion (Phoenix, Arizona)
 Missildine, Whitney H., Eagle Grove (A.P.O., San Francisco, California)

"UPGRADING" OF MEDICAL SERVICES

(Continued from page 563)

have to make one piece of equipment do what two did before.

"This shortage of supplies is perhaps more difficult to solve than is the shortage of personnel, but you will have to solve it as best you can. Urgent needs will be met, but there is no prospect that the requirements of civilian hospitals will take precedence over military needs. Neither is there likelihood that in the broad allocation of materials civilian hospital requirements will take precedence over shell casings and ship plates.

"The lives and hopes and ambitions of every American are touched by decisions we soon must make. Let us approach all these questions with open minds. Let us have no Maginot Line ideas which will be outflanked by events! Blood, bone, and anger alone will not win this greatest of all wars for us. We must plan ahead. Together we must plan the strategy for our health and welfare. We must maintain supplies of men and materials to implement that strategy. Our tactics must have a single goal: A more vigorous America raised to battle strength.

"An example of your open-mindedness in solving a hard problem is your cooperation in the rapid growth of nonprofit community sponsored hospital service plans. These plans have now enabled some ten million Americans to place hospital care in the family budget, along with other necessities. I would like to suggest here that you consider this membership of ten million as only the beginning of a movement concerned with all the people in this country who need hospital care. The test of suc-

cessful distribution of such care is not the present number of subscribers—impressive as that ten million figure is—but rather the ratio of this number to the vastly greater number of Americans who are potential participants of an extended program. Such a program might well utilize whatever facilities of the Federal social insurance system as may be necessary to accomplish the social ends. To serve the needs of today, provision must be made to extend the protection of these plans to those who must shift from community to community. Medical protection which does not serve the migrant and the worker who must shift from his home to a distant community will not serve America's needs in time of war.

"We have a similar problem in Social Security. In planning family security we are only beginning to realize how fundamental is the proposition that economically this nation is 'a seamless web.' Security which lapses or lessens when a family crosses a state line or moves into the jurisdiction of a different hospital plan is no security at all. In meeting the President's charge to plan for health security the Social Security Board had your collaboration. Your Association met with representatives of the Board and contributed to those discussions many constructive and valuable points.

"Long range planning is of vital interest to you, as it is to your Government. You and we want to be sure of the survival and vigor of our hospital system—voluntary and tax-supported. You and your Government want to be sure that all the people of our Nation have ready access to the best hospital service that modern science and skill can furnish. Fortunately, we know how to work together for common ends.

"We have staked our hopes for the freedom of civilization on the simple truth that in union there is strength. We shall require that union and teamwork if medical skills are to be equitably distributed. We shall require that community of effort if professional services are to be economized, if the nation's hospitals are to operate effectively. Only in this way can we harness the hurricane of power we are marshalling to bury the Axis for keeps.

"The ancient axiom that the whole equals the sum of its parts does not hold true for hospitals. If you should add all the physicians, nurses, technicians, administrators, beds and equipment, floor space and endowments—still you would not have a true statement of America's hospital resources. Here the whole is *greater* than the sum of its parts, for behind each hospital stands a spirit which has progressed through all the thousand onslaughts and adversities of twenty centuries—a spirit which we pray shall walk beside us until Victory is won—and after it is won."

SPEAKERS BUREAU ACTIVITIES

A REVIEW OF OUR WORK

The following map depicts graphically the various activities of the Speakers Bureau to date this year. It is evident that the Speakers Bureau work has decreased a great deal in the past six months due to the prevailing conditions.

Eight postgraduate medical courses were arranged and have been well attended considering the fact that many physicians are in military service. During the year twelve requests were received from county medical societies for the assistance of the Bureau in procuring speakers. Twenty-eight recorded medical lectures were sent out to county medical societies and hospital staffs. Various lay organizations throughout the state, such as women's clubs, parent-teacher associations, and service clubs, have availed themselves of the Speakers Bureau services, and thirty-eight medical talks were presented before these groups.

The Committee is deeply grateful to those who

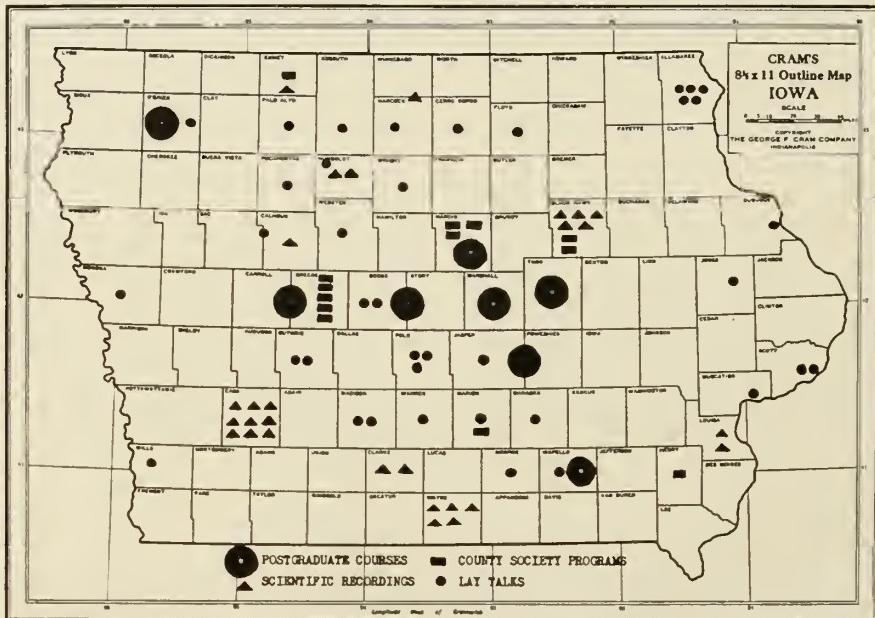
have so enthusiastically supported the Bureau and wishes to extend its sincere thanks to each and every one.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

November 30-December 2	Tuberculosis	Ralph E. Smiley, M.D.
December 7- 9	What is Endocrinology?	Eugene B. Floersch, M.D.
December 14-16	Blood Substitutes for Emergency Use	Carl F. Jordan, M.D.
December 21-23	Winter Health Hazards	Albert A. Schultz, M.D.
December 28-30	Modern Preventive Medicine	Richard W. Driver, M.D.



POSTGRADUATE MEDICAL LECTURES FOR THE MONTH OF DECEMBER

Marshalltown Hotel Talcorn 6:30 p. m.	December 1	The Rôle of the Sulfonamide Drugs in the Surgery of Traumatic Wounds and Compound Fractures Herman F. Johnson, M.D., Omaha
Ottumwa Hotel Ottumwa 6:30 p. m.	December 8	The Treatment of Wounds Lewis M. Overton, M.D., Des Moines
Ottumwa Hotel Ottumwa 6:30 p. m.	December 22	The Treatment of Diabetes William H. Olmsted, M.D., St. Louis
Eldora Cozy Coffee Shop 6:30 p. m.	December 29	Modern Treatment of Pneumonia Fred Sternagel, M.D., West Des Moines

SCIENTIFIC RECORDING SCHEDULED FOR THE MONTH OF DECEMBER

Wayne County Medical Society Corydon 8:00 p. m.	December 8	Sex Hormones: Clinical Application Willard O. Thompson, M.D., Chicago
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WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids

President-Elect—MRS. W. S. REILEY, Red Oak

Secretary—MRS. A. G. FELTER, Van Meter

Treasurer—MRS. A. E. MERKEL, Des Moines

FALL BOARD MEETING

The fall board meeting of the Woman's Auxiliary was held October 8, at the Grace Ransom Tea Room, with the President, Mrs. F. W. Mulsow of Cedar Rapids, presiding. After asking the group to repeat the Lord's Prayer in unison, Mrs. Mulsow postponed matters of business to present Miss Mary McCord, Executive Secretary in the offices of the Iowa State Medical Society. She assured the women of her willingness to help in Auxiliary work, but stated the Speakers Bureau would be unable to assume the responsibility of supplying speakers for health programs during the coming year due to the shortage of doctors. Mrs. Earl Linn, Chairman of the Women's Division of the War Savings Staff, was then introduced and spoke on "Defense." She asked that each Auxiliary have a bond chairman, and stressed women's responsibility in seeing that war savings come first.

Following these talks, Mrs. Mulsow turned to the order of business. Mrs. W. S. Reiley of Red Oak, President-Elect and Organization Chairman, had already started her work but had nothing to report so early in the year. Mrs. E. C. Montgomery of Atlantic, First Vice President, had taken over the work as State Defense Chairman and had as her goal that 90 per cent of each Auxiliary buy defense stamps and bonds.

Mrs. W. R. Hornaday, Chairman of the Nurses Student Loan Fund, emphasized the importance of this enterprise, especially at this time when nurses are so greatly needed. Her report on the growth of this fund was encouraging and it was the opinion of the group that the enlargement of the fund should be a chief ambition for the year.

Mrs. W. A. Seidler, Program Chairman, suggested a most timely topic, "Doctors' Wives in War Service." She advised us that the Program and Legislative Committees had planned to cooperate in their work. Mrs. D. J. Glomset, Public Relations Chairman, announced that her group would support the smallpox legislation program to help banish this dreaded disease from the state. She said that our aim should be to inform ourselves regarding the new methods of vaccination and to learn why some people oppose vaccination.

In the absence of Mrs. Downing, Mrs. Glomset presented her recommendations for the presentation of the Gertrude Downing cup. It was suggested

that, above all, credit should be given to Auxiliaries for promoting the Nurses Loan Fund. Mrs. H. I. McPherrin, Chairman of the Bulletin Committee, urged the importance of Auxiliary members being well informed, and asked that all board members and Auxiliary presidents take the Bulletin.

Following the above reports, Mrs. Mulsow presented, in her sincere, enthusiastic manner, her recommendations for the year and the report of her summer activities. Those present were deeply impressed with the responsibility resting upon the Auxiliary.

Mrs. A. G. Felter, Secretary.

OCTOBER MEETING OF WOMAN'S AUXILIARY TO THE DALLAS-GUTHRIE MEDICAL SOCIETY

The Woman's Auxiliary to the Dallas-Guthrie Medical Society met with the doctors for their regular meeting Thursday, October 15, in Panora. After enjoying a joint dinner at noon, each group held its own separate business meeting during the afternoon. The business meeting was presided over by Mrs. H. E. Haymond of Perry, Vice President, in the absence of the President, Mrs. C. A. Nicoll of Panora.

Election of officers for the coming year was held with the following results: President, Mrs. A. G. Felter, Van Meter; President-Elect, Mrs. H. E. Haymond, Perry; First Vice President, Mrs. C. E. Porter, Redfield; Second Vice President, Mrs. J. M. Margolin, Perry; Secretary, Mrs. E. T. Butterfield, Dallas Center; and Treasurer, Mrs. W. V. Thornburg, Guthrie Center. Following the business meeting Mrs. K. M. Chapler, Dexter, presented a very interesting and instructive paper on "Fortifying Our Foods." Ten members were present.

Mrs. M. H. Brinker, Secretary.

RED CROSS EDUCATIONAL PROGRAM

The October issue of *Hygeia* has several wartime suggestions which everyone should heed. One reads: "Take courses in First Aid, Home Nursing and Nurses Aide to help relieve the burden of trained personnel." To that list I wish to add Food and Nutrition.

First aid, home nursing and food and nutrition courses comprise an educational program which is designed to make the individual more capable in

caring for the home and family, thus contributing to community welfare by making it a safer and better place in which to live.

The home has always been important; in fact, it is the oldest unit in civilization. Dr. Lucas calls it the workshop for developing character and personality. I believe that it is more important today than ever before. Consequently, the first duty of every homemaker is to keep the home intact for the children and for the men in our fighting forces. This program will help to do that.

The courses are given only by the Red Cross organization and are an essential part of Civilian Defense, both in training and in building morale. This is the first time that our country has ever needed Civilian Defense; and to make it a success, everyone must do her part. There are one hundred and thirty Red Cross chapters in Iowa. Why not contact the one nearest you for detailed information?

Mrs. R. C. Doolittle, Des Moines.

(Next month—Nurses Aide Courses.)

THE ARMY MEDICAL OFFICER'S WIFE*

The medical officer's wife is dismayed

By the manifold tasks she must do;

Besides cleaning house and preparing the meals,

There are multiple Post duties too.

She visits the wife of the C. O. at first,

Staying ten minutes flat by the clock;

And unostentatiously places her card

On the table while "Moddom takes stock."

Thereafter, at home, the poor girl always sees

That she's dressed fit to kill "just in case"

Mrs. C. O. "drops in," at which time she "inspects"

To find out if each thing's in its place.

There's afternoon tea or a rubber of bridge,

When each word must be "Army-just-so,"

And no one can leave till the C. O.'s belle dame

Has decided it's high time to go.

There's bi-weekly sessions the ladies attend

Rolling bandages up for Red Cross,

While high on her throne, Madame C. O. holds forth

As the overseer, manager, boss.

Two nights Army officers' wives dress in slacks

And wield bandage, adhesive and such,

Absorb first aid tactics with gas mask and splint,

And acquire the Nightingale touch.

She buys Commissary food three times a week,

At the PX she saves on the rest;

Makes sure hubby's uniforms always are right,

Be they dry cleaned or laundered or pressed.

She polishes emblems her husband must wear—

Yes, sometimes she shines up his shoes—

And carefully wardens the tans and the whites

And the cottons and woolens and blues.

Oh, the Medical Officer serves with a smile;

He is willing to sacrifice life,

But he wouldn't be ready to start each day's work

If he weren't prepared by his wife!

Major, M. C.

*From "The Army Doctor," August, 1942.

BOOK NOTES

Now you may make your choice of books about exercise, because here are two titles prepared from strictly opposite viewpoints. *You Don't Have to Exercise*, by P. J. Steinrohn, M.D., is a doctor's argument that exercise should be slowed up after the middle thirties because the body needs to store up rather than dissipate its energies. Dorothy Nye, in her *Lady Be Fit!*, believes in exercise for energy, efficiency and health. She has a sure reputation as a director of corrective physical education at Bernard. More or less in the same line, though more extensive in treatment, is *Those Enduring Young Charms*, by Ruth H. Larison, which is designed to help women revitalize their beauty, charm, and personality. Every phase of grooming is discussed with frankness and in detail.

And here is unusual advice by W. W. Bauer, M.D. and F. M. Bauer in *Eat What You Want!* The reader is told how to obtain the necessary vitamins, minerals and calories and still enjoy his food. There is even the added feature of what to eat in restaurants. As director of the Bureau of Health Education of the American Medical Association, Dr. Bauer needs no introduction to doctors' wives.

Did you know that many of the idiosyncrasies of the human race have a relationship to climate? So says C. A. Mills, Ph.D., M.D., in *Climate Makes the Man*. Dr. Mills is an expert in the field of experimental medicine and has written about a topic which has many novel and stimulating angles.

The war has suddenly made the public acutely aware of the distribution of doctors in this country. *What The Citizen Should Know About Wartime Medicine*, by Lt. Col. J. R. Darnall, M.D., and R. A. Davies, is an excellent book to recommend to puzzled laymen. Most questions concerning doctors and medicine in civic and army life are answered.

Mrs. K. M. Chapler.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

Nov. 30-Dec. 2 Tuberculosis

Ralph E. Smiley, M.D.

Dec. 7-9 What Is Endocrinology?

Eugene B. Floersch, M.D.

Dec. 14-16 Blood Substitutes for Emergency Use

Carl F. Jordan, M.D.

Dec. 21-23 Winter Health Hazards

Albert A. Schultz, M.D.

Dec. 28-30 Modern Preventive Medicine

Richard W. Driver, M.D.

SOCIETY PROCEEDINGS

Clayton County

The Clayton County Medical Society held its annual election of officers Tuesday, November 10, with the following results: Dr. George W. Tapper of Monona, president; Dr. William H. Thomas of McGregor, vice president; Dr. Placido R. V. Hommel of Elkader, secretary and treasurer. Miss Marquerite Kenneally, public health nurse for Clayton County, was present at the meeting and discussed the county immunization program which is to be carried out in December.

Greene County

The Greene County Medical Society held its regular monthly meeting at the Greene County Hospital in Jefferson Thursday, November 19. Walter E. Chase, M.D., of Rippey presented a discussion on Useful Procedures in Various Common Illnesses.

Humboldt County

The Humboldt County Medical Society met at the home of Drs. Ivan T. and Nelle E. T. Schultz in Humboldt Thursday evening, November 5. During the course of the meeting tribute was paid to the late Dr. James K. Coddington of Humboldt for his forty years of membership in the society. The following officers were elected for the coming year: Dr. Ralph W. Beardsley of Livermore, president; Dr. Cloyce A. Newman of Bode, secretary and treasurer.

Jasper County

The Jasper County Medical Society held its November meeting in Newton at Hotel Maytag Tuesday evening, November 10. Following dinner Louis F. Talley, M.D., of Marshalltown, spoke on X-ray Examinations of the Gallbladder and Stomach. Announcement was made that the annual election of officers would be held at the next meeting of the Society, Tuesday, December 1, at Hotel Maytag in Newton.

Johnson County

The regular monthly meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday evening, November 4. The guest speaker for the evening was Dr. Willard Van Hazel, Associate Professor of Surgery at the University of Illinois, College of Medicine, who discussed the surgical aspects of bronchiectasis.

A. L. Sahs, M.D., Secretary

Louisa County

At the regular monthly meeting of the Louisa County Medical Society, which was held in Columbus Junction Thursday, October 8, the annual election of officers was held with the following results: Dr. Thomas L. Eland of Letts, president; Dr. Frank A. Hubbard of Columbus Junction, vice president; Dr. Ola A. Kabrick of Grandview, secretary and treasurer. Censors elected were Dr. Leslie E. Weber of Wapello, Dr. Samuel J. Lewis of Columbus Junction, and Dr. Frank A. Hubbard of Columbus Junction.

Scott County

The Scott County Medical Society held its regular monthly meeting Tuesday evening, November 3, at the Lend-A-Hand Club in Davenport. Following the annual election of officers, a general business meeting was held.

Henry A. Meyers, M.D., Acting Secretary

Woodbury County

The Woodbury County Medical Society held a special meeting at the Martin Hotel in Sioux City Thursday evening, November 19. Following the six-thirty dinner Jacob N. Lande, M.D., formerly of Sioux City, spoke on The Practice of Medicine and Medical Education in Wartime England.

Wayland K. Hicks, M.D., Secretary

Iowa and Illinois Central District Medical Association

The winter meeting of the Iowa and Illinois Central District Medical Association will be held Thursday evening, December 10, at the Blackhawk Hotel in Davenport. Dinner will be served at 6:30 p. m. The scientific program will be opened at 8:00 p. m. by Jay A. Myers, M.D., Professor of Internal Medicine, Preventive Medicine, and Public Health at the University of Minnesota Medical School, who will speak on The Differential Diagnosis of Chest Diseases. A sound motion picture by Dr. Frank H. Lahey of Boston, entitled Peptic Ulcer, will also be shown.

James Dunn, M.D., Secretary

PERSONAL MENTION

Dr. William H. Howard, who has practiced in Decorah for the past four years, has moved to Minneapolis, Minnesota, where he will continue to specialize in eye, ear, nose and throat work.

Dr. Ewen M. MacEwen, dean of the State University of Iowa College of Medicine, was named president-elect of the Association of American Medical Colleges at the annual meeting held recently in Louisville, Kentucky.

Dr. Frank W. Boland has recently located in Dubuque and has announced his association with the Nesler medical group. Dr. Boland will continue the practice of internal medicine with special attention to cardiology.

Dr. Aaron C. Conaway of Marshalltown, medical officer for the Marshall County Defense Council, addressed the Marshall County nurses Tuesday, November 3, outlining the plans for civilian defense in which the nursing profession will take part.

Dr. William M. Spear has been appointed superintendent of the State Sanatorium at Oakdale to succeed the late Dr. John H. Peck. Dr. Spear has been with this institution for the past five years, during which time he served as staff physician and later as assistant superintendent. He assumed his new duties November 1.

Dr. Frank L. Siberts, who has practiced in Geneva for the past several years, has located in Hampton where he will continue in the general practice of medicine. He is occupying the offices of Dr. Seth G. Walton, who is now in military service.

Dr. George R. Gould, who has practiced medicine at Conrad for the past twenty-five years, has recently announced that he is forced to discontinue his practice because of ill health. He plans to remain in Conrad after his retirement.

Dr. Thomas L. Ward of Arnolds Park has recently been appointed physician for the Dickinson County Home to replace Dr. Clyde G. Nicholson of Spirit Lake, who is now in military service.

Dr. Andrew C. Wooster of Hot Springs, Arkansas, has been assigned to Iowa to direct the state's venereal disease program during the war period. He replaces Dr. Regnar M. Sorensen, former director of the venereal disease division, who is now in military service. Dr. Sorensen is with the United States Public Health Service and is stationed in Topeka, Kansas.

Dr. John H. Stalford of Sac City spoke before the Kiwanis Club of that city Monday, October 26, on the subject of a well rounded life and fatigue.

Dr. Clifford D. Winder of Waterloo spoke before the Lions Club of that city at its meeting Monday, November 2. He talked on the prevention of disease through proper diet and inoculation and also discussed the use of vitamins in maintaining the health of men in the armed forces.

MARRIAGES

The marriage of Mrs. Lucy Hinton and Dr. Paul W. Van Metre, both of Rockwell City, took place Sunday, October 11, in the Presbyterian manse at Jackson, Minnesota. The couple will reside in Rockwell City where Dr. Van Metre has been engaged in the practice of medicine for several years.

DEATH NOTICES

Coddington, James Keel, of Humboldt, aged seventy, died November 4 after a brief illness. He was graduated in 1900 from the State University of Iowa College of Homeopathic Medicine, and at the time of his death was a member of the Humboldt County Medical Society.

Hibbs, Fred Valentine, of Carroll, aged sixty-six, died October 20, following an illness of a few days. He was graduated in 1902 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Carroll County Medical Society.

Hurd, Charles Addison, of Northwood, aged eighty-one, died November 9 after an extended illness. He was graduated in 1888 from the State University of Iowa College of Medicine, and had long been a member of the Worth County Medical Society.

Webb, Harold Homer, of Ottumwa, aged fifty-two, died November 4 of a heart ailment with which he had been afflicted for some time. He was graduated in 1912 from the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, and at the time of his death was a member of the Wapello County Medical Society.

Wiles, Edward William, of Des Moines, aged fifty-four, died suddenly November 3 after a heart attack. He was graduated in 1911 from the Detroit Homeopathic College, and at the time of his death was a member of the Polk County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk

DR. PAUL E. GARDNER, New Hampton

DR. JOHN T. MCCLINTOCK, Iowa City

DR. HENRY G. LANGWORTHY, Dubuque

DR. WALTER L. BIERRING, Des Moines

Medical History of Franklin County

WILLIAM R. ARTHUR, M.D., Hampton, Iowa

- (Continued from last month)

Hampton—Present population 4,006.

The first physician to practice in Hampton seems to be a Dr. Guthrie. The records reveal he came to Hampton in 1856. Besides practicing medicine he ran an inn in a little building on the present site of the Franklin Apartments. The old Franklin County History of 1883 says he was well thought of and of good moral character. He moved from here in 1858 to New Hartford in Butler County, Iowa.

Dr. J. S. Hurd practiced in Hampton for several years before he moved to Chapin, Iowa, in this county.

Dr. C. F. West came to Hampton in 1863 from Missouri. He remained two years and moved to Indianola, Iowa. History relates he did very little practice here but did well after locating in Indianola.

Dr. O. B. Harriman was born September 29, 1836, in Warner, New Hampshire. He was graduated in 1860 from Dartmouth Medical School. Dr. Harriman practiced at Rockford and Marble Rock, Iowa, before locating in Hampton in the spring of 1865. He was county coroner for several years, and was the first president of the Franklin County Medical Society, which was organized February 15, 1876. In 1895 he was selected as a member of the State Board of Medical Examiners. His death occurred on July 8, 1905, and he was buried in the Hampton Cemetery.

Dr. James A. Norton, a native of Ohio and a graduate of the Cleveland Medical College, entered practice here in 1869. He was a politician, and moved from here in 1872 to his native home in Ohio, where he was elected to the state legislature. In 1890 he was elected to the United States Congress for two terms. The doctor died at his home in Tiffin, Ohio, in 1911.

Dr. J. B. Galer was born February 4, 1821, in Pennsylvania. He was a graduate of Rush Medical College in Chicago. He located in Hampton

June 1, 1870, and continued in the practice of his profession until his death on September 11, 1895. He was buried in the Hampton Cemetery.

Dr. J. J. Leas came to Hampton from St. Louis, Missouri, in 1871, for the practice of medicine. He remained here about ten years and then moved to Nebraska. On May 6, 1875, he delivered a baby boy who was named William D. Leahy. He was unaware at the time, nor did he live long enough to realize that this boy was to become Admiral of the United States Navy, and on retiring was to be appointed Governor of Puerto Rico, and later ambassador from the United States to Vichy, France. At present he is Chief of Staff to the Commander in Chief, President Franklin D. Roosevelt.

Dr. Lincoln, a physician of the old school, came to Hampton from Ohio in 1871 and remained one year. He left because his practice was not very extensive.

Dr. James Hutchins was born January 10, 1845, in Kendall, Niagara County, New York. He was graduated in 1871 from Rush Medical College in Chicago. He located in Hampton in 1873 and practiced here until his death on June 23, 1912. He was buried in the Hampton Cemetery. He was county coroner for several years. Miss Ione C. Hutchins, his only child, is still a resident of Hampton and is the wife of H. E. Boehmle, a retired druggist of Hampton.

Dr. C. E. Booth, a native of LeRoy, Wisconsin, and a graduate of Rush Medical College in Chicago, located in Hampton in May, 1876, and was in partnership with Dr. J. H. Hutchins. He remained but six months and returned to his former home in LeRoy, Wisconsin.

Dr. Oscar P. Thompson was born in Hampton, Iowa, on October 22, 1854. He was graduated in 1876 from the State University of Iowa College of Medicine at Iowa City. Dr. Thompson practiced a short time in Wisconsin and in Sheffield,

Iowa, before coming to Hampton in 1877. He remained in practice here but a short time. In 1899 he moved to Shell Rock, Iowa, and practiced there until 1910 when he accepted the position of State Food and Dairy Inspector for Iowa. He continued at this work until 1932 when there was a change in the administration. The doctor likes to tell about the time they nearly had a civil war at Shell Rock while he was in practice there. Shell Rock had two doctors, one of whom was Dr. Thompson. They had an epidemic of smallpox. He called it by its right name, but his opponent called it chickenpox. Each doctor's patients entered into the affair and the state had to go in and clean the matter up. Even until a few years ago there was still some ill feeling about that local war. Dr. Thompson is now eighty-eight years of age. He is quite well and lives in Waterloo, Iowa, with his only son, Dr. Reed Thompson. Mrs. Thompson died a few years ago and is buried in the Hampton Cemetery.

Dr. H. R. Floyd, a native of Canada, was graduated in 1878 from Keokuk Medical College. He came to Hampton in 1881 to practice medicine, remained here about six months and moved to Sheffield. He practiced there until 1886, when he moved away. Before coming to Hampton, Dr. Floyd had practiced at Solon and Tiffin in Johnson County.

Dr. John M. Pride, a graduate of the State University of Iowa College of Medicine, located here in 1878 and practiced about one year in partnership with Dr. O. B. Harriman. He moved from here in 1879 to Whittemore, Kossuth County, Iowa.

Dr. Humphrey, a graduate of the Pennsylvania Medical College, located in Hampton in 1879. The doctor practiced here two years, and in 1881 returned to Cedarville, Illinois, his former home.

Dr. J. Z. E. Funk, a graduate of Rush Medical College, came to Hampton in 1880 and took charge of Dr. Hutchins' practice for nine months, while Dr. Hutchins took a postgraduate course in New York City. After nine months in Hampton, the doctor moved to Spirit Lake, Iowa, and built a good practice of his own at that place.

Dr. H. P. Roberts, a native of New Jersey, was born December 1, 1828. He was graduated in 1857 from Western Reserve University School of Medicine at Cleveland, Ohio. He located in Hampton in 1882, practiced here a few years and then moved to Chapin. He practiced there until December 6, 1901, when he died very suddenly in a restaurant in Hampton, Iowa, at seventy-three years of age. He was buried in Wayside Cemetery just south of Chapin.

Dr. T. H. Baker was an early physician in

Hampton and in 1883 he was the oldest practicing physician in the county.

Dr. E. M. Keys, a native of Iowa, was graduated from the Keokuk Medical College of Physicians and Surgeons at Keokuk, Iowa. He located in Hampton in 1886.

Dr. W. A. Seeley came here from Tama, Iowa, in 1886, but remained only a short time. It was understood he was not a graduate of a medical college.

Dr. Jacob Krebbs, a native of Pennsylvania, was graduated in 1886 from the State University of Iowa College of Medicine. He came to Hampton in 1887. He was associated in practice with Dr. O. B. Harriman for a short time, and later practiced independently. He moved from Hampton to Chicago.

Dr. Arthur S. Ayers, a native of Massachusetts, was graduated in 1888 from the University of Vermont College of Medicine. He located here at once but remained only a short time.

Dr. J. T. Glaze was born in Columbus, Iowa, on June 14, 1853. He was a graduate of Rush Medical College and the State University of Iowa College of Medicine. He practiced in Solon, Iowa, before coming to Hampton in 1889. On September 12, 1891, he was married to Emma Parks of Hampton. In 1893 he sold his practice to Dr. A. J. Hobson and moved to Houston, Texas, where he died May 14, 1926. He was buried in Houston, Texas.

Dr. William A. Rohlf was born in Davenport, Iowa, in 1867. He was graduated in 1891 from the State University of Iowa College of Medicine at Iowa City. He located in Hampton in 1891 and married a Hampton girl, Lottie Beed, in 1893. Dr. Rohlf practiced in Hampton until 1897, when he sold his practice to Dr. J. C. Powers and moved to Waverly, Iowa. He was an energetic promoter, which resulted in the Abraham Slimmer Home at Waverly being transferred to the Sisters of Mercy and called St. Joseph's Mercy Hospital. This was the first hospital in Waverly. Dr. Rohlf was the author of the book "Good Morning, Doctor!" This book shows his outstanding characteristics of cheerfulness and benevolence. Dr. Rohlf, who belonged to many medical societies, will always be remembered for his ability as a good cheerful mixer. His health failed and he retired in 1936. Dr. H. W. Rathe and Dr. O. C. Hardwig erected and completely equipped a fine new office building in 1941, which is a tribute to their esteem for Dr. W. A. Rohlf and is called "The Rohlf Memorial Clinic." Dr. W. A. Rohlf died at his home in Waverly, Iowa, February 17, 1941, after several years of severe illness. He was buried in the Hampton Cemetery.

Dr. Abraham J. Hobson was born in Poweshiek County, Iowa, September 27, 1859. He was graduated in 1884 from the State University of Iowa College of Medicine at Iowa City. He practiced in Bristow, Iowa, from 1884 to 1891. In 1891 he went to the University of Pennsylvania Medical College, from which he was graduated on May 6, 1892. He located in Hampton at once and bought out the practice of Dr. J. T. Glaze. He was associated in practice with Dr. J. C. Powers for several years. In 1910 his son, Carl L. Hobson, went into partnership with him and remained until Carl's death in 1913. He was associated with Dr. M. A. Nicholson for one year, 1912; with Dr. A. H. Chilson for three years, 1913 to 1916; and with Dr. E. D. Allen from 1914 to 1926. Dr. Hobson died November 18, 1926, and was buried in the Hampton Cemetery. He was an honorable citizen, a member of the Congregational Church, Masonic Lodge and was a staunch member of the Republican Party.

Dr. Louis E. Haecker was born November 17, 1863, in Cottage Grove, Wisconsin, and was graduated in 1894 from Rush Medical College in Chicago. He came to Hampton in 1895 and took up the practice of medicine and surgery. As far as could be learned, credit will have to be given Dr. Haecker for opening and running the first private hospital in Hampton soon after locating here. Dr. Haecker paid particular attention to his practice, but also took time to manage his farm in South Dakota. The doctor enjoyed good health until within a few weeks of his death, which occurred on April 18, 1936. He was buried in the Hampton Cemetery.

Dr. Joseph C. Powers was born in Parkersburg, Iowa, on November 24, 1868. He was graduated in 1897 from Rush Medical College in Chicago. He came to Hampton that same year and bought the practice of Dr. W. A. Rohlf, who then moved to Waverly, Iowa. Dr. Powers was the second doctor in the county to establish a private hospital, which he did in 1904. During his practice he was also co-partner in two other private hospitals. When the Lutheran Hospital was organized, he was one of the main promoters and organizers, and the hospital was opened for business September 1, 1915. During the years he was in general practice he was associated with Dr. A. J. Hobson for several years, Dr. C. F. Osborne for a few years, and with Dr. W. R. Arthur for two years, selling out to the latter in 1914. He spent some time in specializing in eye, ear, nose and throat work and then became associated with the Hampton Clinic. He has since devoted his time to his specialty and is still in active practice. He is also

interested in farming. Dr. Powers was the first president of the Hampton Rotary Club, which was organized in 1924; he was mayor of Hampton for several terms; a member of the Board of Education for several years; a medical examiner on the draft board of World War I; the medical examiner of a Selective Service Board in World War II; and a fellow of the American College of Physicians and Surgeons. His main hobby is Boy Scout work. He is a member of the Regional Executive Committee which governs a region of eight states, and also is a past president of the Winnebago Council.

Dr. Harry Melerian was born in Adona, Asia Minor, in 1868, and claimed he was of Armenian descent. He left home at the age of seventeen, and came to the United States in 1887. He was graduated in 1896 from Rush Medical College in Chicago. In 1898 he came to Hampton and was associated with Dr. L. E. Haecker for one year. He left here because of ill health and moved to Plainview, Nebraska, where he is still in practice.

Dr. Will Hoxie was born September 16, 1869, in Allens Grove, Franklin County, Iowa, and was graduated in 1898 from the State University of Iowa College of Medicine in Iowa City. He took a postgraduate course at Rush Medical College in 1899. He practiced with his brother, Dr. Dwight Hoxie, at Belmond, Iowa, from 1899 to 1900, and then moved to Hampton, where he practiced until 1918. He did not practice for a while in order to take care of his father's farms and estate. It was but a few years, however, until he resumed his practice, which he continued until his death in September, 1929. He was buried in Hampton Cemetery.

Dr. Gilbert T. McDowell was born in Traer, Iowa, on March 16, 1875. He was graduated in 1902 from the State University of Iowa College of Medicine. He came to Hampton from Tripp, South Dakota, in 1904, and remained until 1907. He then moved to Gladbrook, Iowa, where he is still in active practice.

Dr. F. E. E. St. Clair was born November 22, 1876, in Franklin County, Iowa, three miles south of Hampton, Iowa. He was graduated in 1895 from the Hampton High School; in 1901 from Highland Park College; and in 1904 from Jefferson Medical College of Philadelphia. He came to Hampton in 1904 and practiced until his death on March 24, 1931. He was buried in the Hampton Cemetery.

Dr. C. F. Osborne was born March 15, 1877, in Clear Lake, Iowa, and was graduated in 1900 from the College of Physicians and Surgeons in

Chicago, Illinois. He located at Aredale, Iowa, after graduating from his medical course, and came to Hampton from Aredale in 1906. Dr. Osborne took several courses in surgery. He was associated with Dr. J. C. Powers for about five years. Dr. Osborne promoted the Hampton Lutheran Hospital and became the first to practice surgery in that institution. While he and Dr. Powers were associated they ran a private hospital in the southwest part of town. The doctor, at the time of his death, had one of the finest herds of Guernsey cattle in the state. He was always a real promoter. He promoted several banks, the Hampton Brick and Tile Plant, and the Odorgone factory for a patent medicine. Dr. Osborne died on February 5, 1928, near Humboldt, Iowa, while driving his car. He was buried in the cemetery at Clear Lake, Iowa.

Dr. William C. Hand was born in Sidney, Ohio, on June 12, 1877. He was graduated in 1896 from Hampton High School and in 1906 from Northwestern University Medical School. For a short time during 1906 he was assistant to Dr. L. E. Haecker. He then moved to Hartley, Iowa, where he is still in active practice and is owner and manager of the Hand Hospital.

Dr. Walter F. Missman was born February 14, 1880, in Mount Hampton. He was graduated in 1908 from the State University of Iowa College of Medicine. In 1908 and 1909 he practiced with his uncle, Dr. L. E. Haecker. He then moved to Klemme, Iowa, where he is still in active practice.

Dr. D. O. King was born in Bonum, Texas, in 1879, and was graduated in 1909 from Missouri Medical College in St. Louis. Dr. King was associated with Dr. L. E. Haecker for a short time during 1909. He moved from here in September, 1909, to Eldora, Iowa, where he practiced until 1914. He then came back to Hampton and practiced from September, 1914, until April, 1915, when he returned to Eldora. Dr. King is now in practice in Waterloo, Iowa. Dr. King served his country in the first World War.

Dr. Carl L. Hobson was born in Bristow, Iowa, on August 29, 1886. He was a graduate of the Hampton High School and in 1910 was graduated from Pennsylvania Medical College in Philadelphia. He entered partnership with his father, Dr. A. J. Hobson, in 1910, and practiced with him until his untimely death on November 14, 1913. Dr. Carl Hobson was a fine young man and his bright future was cut short. He was buried in the Hampton Cemetery.

Dr. Myrta M. Knowles was born January 3, 1875, in LaPorte City, Iowa. She was graduated

in 1896 from the State University of Iowa College of Medicine in Iowa City. Dr. Knowles came to Hampton in 1911 and was associated with Dr. C. F. Osborne until 1917. She then moved to Chicago and for twenty-four years was head of the anesthetic department at St. Luke's Hospital in Chicago. Dr. Knowles is now living in Colorado Springs, Colorado.

Dr. Walter K. Long, whose father was also a doctor, was born in Tamaqua, Pennsylvania, on February 7, 1876. Dr. Long studied medicine at Lincoln, Nebraska, and was graduated in 1906 from Northwestern Medical College in Chicago. Later he studied in Vienna, Austria. The doctor located in Latimer in 1911, remained one year, and moved to Hampton in 1912. He was associated one year with Dr. L. E. Haecker, and in 1913 entered private practice. When the Lutheran Hospital was built, he was one of the promoters, and when it opened in 1915 he became associated with the Hampton Clinic and devoted his time to internal medicine. He served his country in World War I and was discharged as a captain. He then resumed his position with the Hampton Clinic. He was a charter member of the George Aldinger Post of the American Legion in Hampton, Iowa; he was also a charter member of the Hampton Rotary Club, which was organized in 1924. Dr. Long became ill with an abscess of the liver and his death occurred on April 3, 1936. Burial was made in the Hampton Cemetery.

Dr. M. A. Nicholson was graduated in 1911 from Pennsylvania Medical College in Philadelphia. He came here in 1912 and was associated with Dr. A. J. Hobson for one year. He moved from here in 1913 and located in Duluth, Minnesota, where he is now located and devotes his time to the practice of urology.

Dr. W. R. Arthur was born July 13, 1878, in Council Hill, Illinois. He was graduated in 1907 from the State University of Iowa College of Medicine. He practiced in Greene, Iowa, from 1907 to 1912. After taking special work at Northwestern University Medical College in 1912, he came to Hampton in August of that same year and was associated with Dr. J. C. Powers until 1914, when he took over the entire practice. He was county coroner from 1921 to 1933, city health officer for several years, and a member of the medical reserve in the first World War. He is medical examiner for the Selective Service Board in the present war, and has been president of the Franklin County Medical Society since 1933.

(To be continued)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT—By Augustus Thordike, M.D., associate in surgery, Harvard Medical School. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$3.00.

DERMATOLOGIC THERAPY IN GENERAL PRACTICE—By Marion B. Sulzberger, M.D., assistant clinical professor of dermatology and syphilology, New York Postgraduate Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

ELECTROTHERAPY AND LIGHT THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$8.00.

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, \$3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, \$5.00.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, \$3.00.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, \$4.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, \$3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, \$6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, \$6.75.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schauffler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, \$5.00.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, \$4.50.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS—By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, \$7.50.

VAGINAL HYSTERECTOMY—By James W. Kennedy, M.D., surgeon-in-chief to the Joseph Price Hospital, Philadelphia; and Archibald D. Campbell, M.D., assistant professor of obstetrics and gynecology, McGill University. F. A. Davis Company, Philadelphia, 1942. Price, \$10.00.

BOOK REVIEWS

A TEXTBOOK OF GYNECOLOGY

By Arthur Hale Curtis, M.D., professor and chairman of the department of obstetrics and gynecology, Northwestern University Medical School. Fourth edition, reset. W. B. Saunders Company, Philadelphia, 1942. Price, \$8.00.

The author presents the revised fourth edition of this standard textbook of gynecology. The text is clearly written throughout and the well organized sections include worthwhile discussion of common gynecologic conditions. The sections on the cellulitis group of pelvic infections, fibroids, cancer of the cervix, ovarian tumors, uterine prolapse and uterine hemorrhage are well worth careful attention. In general, the constructive approach to the management of the common gynecologic conditions is sufficient recommendation for this text. A. W. B.

this volume the author presents in a simple, straightforward and honest manner the value, practical application and clinical factors of a subject which is indeed most important at the present time. This book will be particularly valuable to the physicians who are not in military service. It will help them to recognize and treat conservatively traumatic lesions of the brain, spinal cord and nerves, making it necessary to refer only the more serious complications to neurosurgical centers. It is the opinion of the author that this volume should be used extensively in the field ever increasing in its scope. W. D. A.

THE STORY OF CLINICAL PULMONARY TUBERCULOSIS

By Lawrason Brown, M.D., late director of Trudeau Sanatorium. The Williams and Wilkins Company, Baltimore, 1941. Price, \$2.75.

This book was compiled from Dr. Lawrason Brown's lectures on the history of pulmonary tuberculosis and from voluminous notes which were found in his effects following his death in December, 1937. He had planned to write a book, but due to his failing health had been unable to do so. His original plan for the book was carried out as far as possible.

In the introduction Dr. Brown explains the rationale of dividing the history of tuberculosis into

THE PRINCIPLES OF NEUROLOGICAL SURGERY

Loyal Davis, M.D., professor of surgery, Northwestern University Medical School. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, \$7.00.

This is a more practical recitation of neurologic surgery than the first edition published in 1936. In

four periods. The first period concerns antiquity, in which are discussed evidences of tuberculosis in the stone age and later when the giants of medicine of that time, Hippocrates and Aretaeus, gave their classic descriptions of the disease. We know now that these descriptions are of the far advanced disease, and are by no means employable for modern use. The second period covers the latter half of the seventeenth and all of the eighteenth centuries and extends "from the time of the anatomical studies of Sylvius (1650) to the time of the clinical studies of Laennec (1819)." The third period covers the first three quarters of the nineteenth century "from the time of Laennec's classical treatise on auscultation to the time of Villemin's proof of the inocability (infectiousness) of tuberculosis." The fourth period extends only twenty years from Villemin's time to the time of the discovery of the tubercle bacillus by Robert Koch.

Dr. Brown has made his book very interesting by illustrating the knowledge of tuberculosis in the various periods in the application of diagnostic and therapeutic procedures toward the tuberculous patient of those times. The various technics used to diagnose the disease and the different drugs employed in an attempt to aid the patient are of great interest to us now. The slow climb toward the understanding of the basic pathology is delineated with care and tolerance.

Dr. Brown evidently felt that Laennec was one of the greatest contributors to medicine who ever lived. Chapters are included on Laennec and His Successors, Laennec and His Writings, and The Story of the Stethoscope, which are filled with intimate glimpses of the personality of Laennec, as well as the appreciation of the prodigious work which he had done to put his newly found technic on a firm basis.

The section on artificial pneumothorax was written from notes which Dr. Brown had compiled, and it is a masterly treatment of the history of the use of this helpful procedure. The clinical observation of many men using the method is delineated in full, noting the lack of logic in many as well as the brilliant logical deductions of others.

Dr. Edward W. Archibald contributed the chapter on Development of Surgical Methods, and it portrays the increasing use of surgery as applied to the tuberculous patient. An extensive bibliography has been used and is listed as a matter of interest.

This is no cut and dried history of a limited line of medical endeavor. It is a flowing account of the ups and downs in the lives of many medical men in their fight against a disease which is still all to prevalent. It is as interesting as any historical novel, and should be read by all doctors so that they may see what the strivings and tenacity of the search for knowledge may produce. It is recommended highly, and without qualification.

J. C. P.

THE MODERN ATTACK ON TUBERCULOSIS

By Henry D. Chadwick, M.D., Medical Director of Middlesex Tuberculosis Sanatorium; and Alton S. Pope, M.D., Director of the Division of Tuberculosis, Commonwealth Fund, New York, 1942. Price, \$1.00.

This excellent little book "makes no pretense of adding to the sum of our knowledge of tuberculosis." It discusses all the phases of tuberculosis control work. Since the decline of tuberculosis has been almost continuous since 1842, due to prevention rather than treatment, the officers feel that an understanding of the epidemiology of the disease is essential to the planning of an effective control program. The essentials of this program are: first, a medical profession interested in the problem and familiar with the modern methods of diagnosis and treatment; second, complete diagnostic x-ray and laboratory facilities freely available to all physicians in a community and to the health department, regardless of the patient's ability to pay; third, a well-organized active health department with complete family records of all cases and a public health nursing service capable of teaching preventive measures in the home and maintaining effective contact between patient, doctor and health department; and fourth, the director of the program must be a physician with sound public health training and experience, familiar with the varied problems of tuberculosis control, alert to determine where and under what circumstances the disease is to be found in his territory and capable of enlisting the efforts of all people and agencies who can contribute to his comprehensive control plan.

Each factor is fully discussed from the experiences of these authors in the Commonwealth of Massachusetts. They think the tuberculin test is of little importance in a mass survey work among adults. In x-rays, they feel that the 14 by 14 films save money and are large enough for nearly all women and about 75 per cent of the men. Sanatorium treatment is emphasized as a means of protecting the public while treatment is administered. More hospital beds are needed in many states for the care of the active cases. Artificial pneumothorax is advised in many instances, especially in the minimal tuberculosis discovered in the primary cases found in children approaching puberty and in adolescence, the danger period. The importance of protecting medical students, nurses and sanatorium personnel during tuberculosis contact is emphasized.

In the final chapter, a forecast is made that a hope for the ultimate surrender of the tubercle bacillus may take place in the fields of chemotherapy and nutrition, but while waiting for the new discoveries, we should make full use of the knowledge we have.

E. W. A.

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